

**Strengthening educational advancement for enrolled nurses:
Developing a new program framework for Uganda.**

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List of abbreviations and acronyms

ADHO:	Assistant District Health Officer.
AMREF:	African Medical and Research Foundation
BSN:	Bachelor of Science in Nursing
BTVET:	Business, Technical, Vocational Education and Training.
COR:	Chain-of-Response model
ECN:	Enrolled Comprehensive Nurse
EN:	Enrolled Nurse
FGD:	Focus Group Discussion
HIC:	High Income Country
IA:	Internal Assessment
ICN:	International Council of Nurses
ICT:	Information Communication Technology
IE:	External Evaluation
LIC:	Low Income Country
LPN:	Licensed Practical Nurse
LVN:	Licensed Vocational Nurse
MoH:	Ministry of Health
MoPS:	Ministry of Public Service
MSc:	Master of Science
PFP:	Private for Profit
PNFP:	Private Not for Profit
RN:	Registered Nurse
UNCST:	Uganda National Council for Science and Technology
UNMC:	Uganda Nurses and Midwives Council
UNMEB:	Uganda Nurses and Midwives Examination Board
UoS:	University of Salford
WHO:	World Health Organisation

Operational definitions

Conversion: The process and program by which an enrolled nurse upgrades their career from certificate level to diploma level, hence becoming a registered nurse.

Dispositional barriers to participation: Barriers to educational advancement that reflect an individual's negative attitudes and perceptions about returning to school that limit their success.

Educational advancement: The career progression from one educational level to another within a specific qualifications' framework.

Enrolled Nurse: A person who has been trained in a certificate level training program and licensed under the Uganda Nurses and Midwives Act, as an Enrolled Nurse (EN) or Enrolled Comprehensive Nurse (ECN). According to the schemes of service for the nursing and midwifery cadre (2017;p15), both EN and ECN are considered as EN. From the international perspective, the EN definition adopted is that of the 2008 International Standard Classification of Occupations (ISCO-08): nursing associate professional (ISCO code 3221).

Extension: This is a diploma program that supports educational advancement for upgrading enrolled nurses from certificate level.

Flexible training: A principle of formal education, concerned with increasing flexibility in the requirements, time and location of study, teaching, assessment, and certification.

Framework: An organisation of the recommendations for educational advancement of enrolled nurses, into an easy-to-understand structure.

Institutional barriers to participation: Barriers to education that that arise from the institution, including processes that eliminate or discourage occupied adults from participating in educational activities, such as inconvenient schedules or locations, inflexible school fees payment terms, and inappropriate course offerings.

Non-traditional students: Those students who are independent of their parents' support, work during the school year and have had a life-changing event, which has caused the student's mind-set to change from that of a traditional student.

Post-basic: Refers to a category of qualifications on the Ugandan Vocational Qualifications Framework that is higher than the diploma and below the bachelor's degree. It is also called the advanced diploma.

Pre-service programs: Nursing education programs leading to award of a nursing license for the first time.

Situational barriers to participation: Barriers to education that arise from one's situation in life, such as family, work, poverty, adult identity, cultural issues, and learning tracks.

Abstract

Uganda has three pre-service program levels for entering nursing practice, the first of which is, the Enrolled Nurse (EN) and constitutes majority of Uganda's nursing workforce. While these enrolled nurses constitute a substantial proportion of the nursing workforce and are the lowest on the qualification's framework, their educational advancement opportunities remain limited. A host of barriers are implicated including unsuitable program schedules among others. Due to work and family commitments ENs find themselves unmatched to available programs which are supposed to target them.

Most of the literature on EN educational advancement originates from High income countries, such as Australia, Canada, USA, and European countries. Within Uganda, a low-income country, there is a lack of understanding of the needs of ENs who struggle to access educational advancement programs. Therefore, this thesis explores ENs experiences, aspirations and needs with respect to advancing their nursing careers, hence generating new evidence for designing responsive education programs.

The research progressed in three phases guided by Cross' Chain of Response Model. The study utilized a mixed methods multiphase design targeting four Focus Group Discussions (FGDs) with ENs (N=38) and exposed experiences aspirations and needs for their educational advancement within Uganda (phase 1). The knowledge generated from the FGDs was used to ground a cross-sectional survey of barriers and facilitators which was administered to a target random sample (n=423) of ENs (phase two). Interviews with key educators (n=9) examined the suitability of Ugandan EN-RN advancement programs in meeting EN education needs (phase three).

Findings reveal a population of ENs who have strong aspirations for educational advancement yet remain unserved by the current advancement education. Consequently, ENs described their experience as worrying, frustrating and desperate. To advance, they need tuition support, flexible scheduling of advancement education, favourable policies, and support of their employers among others. A comprehensive and stratified table of model elements necessary for building responsive EN-RN programs is presented.

COVID-19 impact statement

Due to the COVID19 disruptions, some of the research processes and timelines for this study were disrupted. In particular, the research data collection process for phase two (survey) and three (Interviews) could not progress as earlier planned. The survey tool was supposed to be researcher administered and this was to be physical/in-person, however, due to travel bans and a host of related in-country restrictions, this was not possible. The interviews were also supposed to be at the interviewee's location/office and in-person, but this was not possible for the same COVID19 disruptions and restrictions. Other study engagements such as meetings with research assistant, statistician, and other resource persons were also critically restricted as Uganda had implemented a total lock down at the time when these research activities were scheduled to be in full implementation phase. Further, travel to the University of Salford to access professors and university facilities/resources was not possible.

Overall, there was a shift in priorities to stay alive at personal level; support loved ones at family level; support friends and neighbours at community level; and support colleagues and students at our workplace. This led to significant delays in recruitment, data collection and analysis for the study phases. Some analysis training sessions were delayed and access to writing spaces was limited. The affected work would have enabled the study data collection, analysis and report writing to proceed much faster.

The data collection phases were shifted to alternative methods that were possible at the time. The survey was still researcher administered, but through the telephone. The same arrangement was possible for the interviews. The necessary ethical requirements were processed. Access to training and other resources was later possible through telecommunication technologies. Delays were compensated by the University of Salford through timeline extensions. Despite the delays, the resilience, patience and focus of the researcher to achieve the study objectives led to learning opportunities on how to manage and overcome different challenges, enhanced the skills to reassess and change the research process to generate valuable rigorous data that contributed new knowledge to the field and will certainly change and influence EN advancement in the future. For example, due to travel and meeting restrictions, the researcher learnt how to conduct telephone interviews which turned out to be excellent alternatives achieving detailed and complete data. Further, there was convenience in scheduling interviews allowing for best times and locations.

Chapter 1: Nursing Education in Uganda

1.1 Introduction to the thesis

Nursing education in Uganda has expanded over the last century, in both the quality and quantity of candidates and the number of available training programs (Mbalinda, Nabirye, & Mbabali, 2013). Uganda has three pre-service program levels for entering nursing practice, the first level the Enrolled Nurse (EN), constitutes over 70% of Uganda's nursing workforce (Uganda Nurses and Midwives Examinations Board, 2020). Once ENs become professional nurses, they enter the practice market while being expected to continue their career advancement journey to registered nurse (RN) status. There are government calls across Sub-Saharan Africa to phase out the EN role and to invest in registered nurses (RNs) as the majority workforce, to improve the quality of patient care (Blegen, Goode, Park, Vaughn, & Spetz, 2013). Within many high-income countries (HIC), such as United Kingdom (UK), United States of America (US) and Australia the transition of the workforce to higher qualified RNs has been achieved by increasing access to advanced education through innovatively structured programs, developed to target ENs (Ayer & Smith, 2017; Calder & McCollum, 2013; Choitz & Prince, 2008; Hudson, Lyn, & Maslin-Prothero, 2014; Lewis et al., 2016; Matsiko & Kiwanuka, 2003).

The current situation in Uganda is very different, with nurses struggling to access appropriate advancement education programmes, indeed programmes report less than 6% of ENs progress through to RN (Ministry of Health Uganda, 2018a). With such slow advancement, achieving an increased RN workforce will be a significant challenge for Uganda and most African countries (Drennan & Ross, 2019; Munjanja, Kibuka, & Dovlo, 2005; Nabirye, Lessabari, Katungi, Karani, & Katende, 2014; Naicker, Eastwood, Plange-Rhule, & Tutt, 2010; Naicker, Plange-Rhule, Tutt, & Eastwood, 2009; Willcox et al., 2015; World Health Organisation, 2017b). As a nurse educator in Uganda there is an awareness, but no robust evidence, to suggest barriers to accessing advanced education for ENs exist; including unsuitable education schedules, lack of study time and the need to work to support their families. Access and availability of education programmes need to be examined and potentially redeveloped, as the low number of ENs progressing signifies a problem. Generating a robust evidence base of ENs needs and aspirations, alongside exposing barriers and facilitators to career advancement in Uganda forms the basis of this PhD, with the view

to propose elements for a new flexible education approach to address the service demand for the future, applicable across Sub-Saharan Africa.

This first chapter sets the scene for the PhD thesis, discussing the historical development of the nursing education and nursing workforce in Uganda. It exposes key players within this low resource context and provides an understanding of the size of the nursing workforce, the EN scope of practice and discusses the impact of current calls to completely phase out the EN role. Several factors regarding the organisation and delivery of both nursing education and practice that influence ENs striving to advance their careers are examined. The origins of the profession and my motivation and reflections on the research problem, as a nurse educator are exposed, giving course to the thinking and journey that lies ahead in the different chapters of the thesis. Finally, the aims and objectives of this study clarify the focus of the research study.

1.2 Background

Nursing and nursing education in Uganda have expanded since the early 19th century when the profession was first introduced by Katherine Timpson (Dimock, 2017; Mbalinda et al., 2013; Pirouet, 1969; Uganda Nurses and Midwives Council, 2010). Katherine's initial quest, in a remote British Protectorate hospital in the Mengo area, was to solve an immediate practical problem of people dying and to get help for her eleven missionary professional colleagues, who were over stretched by the caring workload. Through her efforts, the nursing and midwifery profession was born in Uganda. The early years were challenging because of the non-literate pool of prospective candidates into nursing, the communities that were not able to speak her language (English), and herself, a visitor and unable to speak the local language, Luganda. Given this challenging demographic background, the inception of the profession and the work that followed were commendable. Compared with nursing today, much has changed and improved, rendering the early nursing education as rudimentary, although the best available at the time. The nursing and midwifery programs were initially instructed in the local language in which many missionary tutors were not fluent. There was no clear admission strategy, no clear standards, and they used one locally written Luganda book that developed as the training progressed with most of the teaching/learning delivered similar to a lower apprenticeship model (Cook, Phyllis, Coryndon, & Timpson, 1986; Holden & Littlewood, 1991; Klopper & Awotidebe, 2013; Uys, 2013). At the time, training emphasized that the nurse's role was to play handmaiden to the physician with minimal

rationale or inquiry for care actions or decisions (Cook, 1930), given the location and level of national nurse development, this was all that could be expected. Similarly, countries across the East African region shared a comparable trend of professional inception, timing, players, and circumstances (Moyo & Mhamela, 2011; Munjanja et al., 2005; Osero, 2018).

Since then, nursing education in Uganda has advanced. Entry-level requirements into nursing programs improved from a non-schooled single ethnic niche to a secondary level schooled multi-ethnic niche. The language of instruction changed from Luganda, the local dialect, to English, which enabled access to published nursing books possible. This also opened opportunities to use the many available nursing teaching and learning materials readily available in English. More importantly, the English language made it possible to draw on and use the experience of the missionary expatriate nurses, midwives, and physicians available as faculty. Other improvements included clear admission strategies and structures, alongside educational regulatory institutions that came into play later (Ministry of Education and Sports Uganda, 2012a). Drivers of quality standards, for instruction environments, assessments, and tutor requirements were introduced (National Council for Higher Education, 2014; UNMEB, 2018). Several standard local and international learning materials, and learning methods have been developed, adopted, suitably blended, and used in instruction (Ayoo & Lubega, 2008; Brownie, Gatimu, Wahedna, Kambo, & Ndirangu, 2019; Mbalinda et al., 2013). Through the decades following inception, pre-license programs moved from a single unlicensed nursing and midwifery program to many licensed programs, at both EN and RN levels, including advancements into post basic specialized disciplines (UNMC, 1996). Professional advancement from the lowest certificate nursing level program was made possible through educational advancement programs, commonly referred to as extension or upgrading programs. Commendably, programs for professional development were established at graduate and post graduate levels in nursing (Mbalinda et al., 2013). In relation to students, there was an increase in the number of new candidates entering the profession, from tens to thousands in multiple programs. The number of nursing schools also increased from one missionary school centrally located at Mengo to slightly over one hundred schools owned by different stakeholders and spread throughout the country's urban and rural regions (UNMC, 2017b; UNMEB, 2017). Nursing education was introduced into higher education colleges and universities (Mbalinda et al., 2013; MoH Uganda, 2018b; UNMC, 2017b). This initiated the production of local context nursing and midwifery knowledge, hence professionalizing nursing.

Whilst these developments in nursing education and training were admirable, there remained some areas of nurse education which had not experienced much change, where further development was required. Such an area was the educational advancement of post licensed nurses. In particular, this was concerned with how nurses advanced their education after joining the profession for the first time, as evidence suggested educational growth within the profession was low (Uganda Nurses and Midwives Council, 2016; UNMEB, 2020). A report of nurses educational growth from their first pre-service program level taken over a five year period (between 2011-2016), reported that less than 10% of ENs were able to advance from EN to RN (UNMC, 2016). According to the overall professional regulator statistics, over 70% of ENs remained at their first entry to practice level/qualification by the end of their first five years post qualification (UNMC, 2016). Further evidence showed that in a four-year period, from 2016-2019, enrolments into EN were 29,515 compared to enrolments of advancing ENs into RNs only 4,087 (13.8%) (Table 1). Although not a direct match of the same candidates, it illustrates that ENs enrolling into advancement programs are significantly fewer compared to the pre-licensure EN program enrolments. Therefore, its vital to understand why there was low growth from EN-RN, yet the RN was more relevant and rewarded.

Table 1: Enrolments into EN and EN-RN advancement programs between 2016-2019 (UNMEB, 2020:p7)

Program enrolled	Yearly enrolment				Total
	2016	2017	2018	2019	
Direct enrolment (EN+ECN)	6,673	6,377	6,730	9,736	29,516
Advancement EN-RN (DCNE +DNE)	966	842	1,079	1,200	4,087

(Key: ECN- Enrolled Comprehensive Nurse; DCNE- Diploma Comprehensive Nursing Extension; DNE- Diploma Nursing Extension)

Further, statistics from one of the major stakeholders in nursing education, the Uganda Catholic Medical Bureau (UCMB), as captured in the Ministry of Health Annual Health Sector Performance Report 2017/2018 (MoH Uganda, 2018a), indicated that, of the healthcare workers they trained between 2011 to 2017, only 6% progressed through the EN to RN advancement scheme. This further highlights the challenge of limited/low growth from the EN to the RN, as shown in Table 2 in the row for Diploma Nursing extension.

Table 2: Nurse training statistics for Uganda Catholic Medical Bureau (MoH Uganda, 2018a:p168)

Programs	2011/ 2012	2012/ 2013	2013/ 2014	2014/ 2015	2015/ 2016	2016/ 2017	Total	% By program
Certificate Nursing	148	176	230	349	327	327	1,584	29%
Certificate Midwife	137	250	292	401	443	443	1,958	36%
Certificate Comprehensive Nursing	145	131	33	39	0	0	348	6%
Certificate Clinical Laboratory	85	109	48	91	114	59	506	9%
Diploma Nursing	29	37	43	56	13	27	205	4%
Diploma Midwifery	0	0	0	0	0		0	0%
Diploma Nursing extension	39	67	55	50	48	83	342	6%
Diploma Midwifery extension	62	35	49	39	89	43	317	6%
Diploma Medical Clinical Laboratory	22	9	27	39	67	29	193	4%
E-Learning			14	0	0	0	14	0%
TOTAL	667	814	791	1,064	1101	1,011	5,467	

Reasons for this low advancement rate include the immediate shift in student lives, following completion of their first licensure training. When nursing students qualified and entered the job market, their life situations changed and they could no longer access education due to time and working constraints, relationships and transitions (Flynn, Brown, Johnson, & Rodger, 2011; Levinson, 1986). Much of their time was committed to practice, whether employed or working privately. As they began to earn, they became independent people, with shifts in responsibilities and social economic status. Competing priorities for often limited resources, included work, new relationships, and family engagements, which dictated how time and financial resources were spent, making it challenging for new nurses to achieve continued educational advancement. At the same time the designed framework for offering advancement education was not flexible, hence a key contributor to the low uptake of educational advancement by ENs (Klein-Collins, 2011b; Voluntary Service Overseas, 2012a). The majority of current EN advancement education programs were fulltime and residential, still running on the initial design constructed by Katherine Timpson in the 1930's, whose target population at that time was preservice students and under the care of their parents/guardians. This fulltime and residential model worked well for preservice students for whom time, family and work commitments are not complex. This type of education design was not appropriate for working ENs seeking educational advancement. Unless new

evidence-based solutions are sought on how best to support these ENs, their educational advancement will remain a challenge. This has been a challenge for some decades and remains one of those nursing education areas in which changes have not been implemented and evidence has not been built. Throughout the developed world, the design of programs for working nurses has been acknowledged as a key enabling factor for educational advancement, and Uganda needs to learn from the same (Ayer & Smith, 1998, 2017; Choitz & Prince, 2008; Klein-Collins, 2011a). Advancement education needs to be flexible and recognize the time constraint nurses face as a result of work and family commitments (Collins, 2004).

Contextualized research into this area was limited and there was no evidence that identified the most appropriate educational advancement designs or frameworks for working ENs in a low resource environment, such as for Uganda. In addition, aggregated and published data on human resources for health was limited, making planning for advancement difficult (Spero, McQuide, & Matte, 2011). Evidence demonstrating the benefits of career advancement to care outcomes is prevalent yet Uganda continues to concentrate the majority of its workforce at the lowest education level (Jacob, McKenna, & D'amore, 2015; Nguyen, 2014). Given that in Uganda the ENs deliver most of the face-to-face patient care, including the first contact of care, evidence to inform their accelerated educational growth should be prioritized. This study contributes new knowledge in this field and generates Ugandan solutions that would be applicable to other low resource settings.

1.3 Nursing workforce – international comparisons

Globally there are 28 million nurses accounting for 54% of the world healthcare workforce (WHO, 2020b). While these nurses are the single majority healthcare professions workforce, they are also in the front line for health care provision in most healthcare systems of the world and have been expected to lead healthcare transformation initiatives (Buchan & Calman, 2004; WHO, 2017b). To be at the frontline and lead these healthcare initiatives nurses have to be appropriately qualified and skilled (Laurant et al., 2018; WHO, 2020b), and there are nursing cadres that are trained to lead, by the level of their preparation. Evidence suggests that better healthcare outcomes correlate to nurses' level of education, with preference for RNs over ENs or their equivalents such as Licensed Practical Nurses/Licensed Vocational Nurses (LPN/LVNs) (Aiken, Clarke, Sloane, Lake, & Cheney, 2008; Blegen, Goode, Park, Vaughn, & Spetz, 2013). Recommendations suggest that the threshold for

maximum gain occurs at the bachelor nurses' education level (Blegen et al., 2013). However, globally there is a shortage of RNs and efforts need to be made to accelerate EN (LPN/LVN) training and education (Buchan & Calman, 2004; Juraschek, Zhang, Ranganathan, & Lin, 2019). In response, the majority of the High Income Countries (HICs) have developed initiatives allowing their nursing workforce to meet this target, making the RN or BSN, a bachelor license category level education the primary entry to practice level (American Association of Colleges of Nursing, 2019; Institute of Medicine, 2011; WHO, 2020b). Some educational developments have involved construction of supportive flexible education frameworks that recognize the circumstances of the nursing workforce who need to advance their education. This has led to improvements in their countries' nursing workforce moving towards the targeted RN and BSN. It follows then that the nursing workforce in these HICs such as the USA, UK, Canada and Australia tend to have a greater percentage of their nursing workforce educated to the level of BSN and licensed at the RN cadre (Canadian Institute for Health Information, 2020; Nursing and Midwifery Board of Australia, 2020; Nursing and Midwifery Council, 2020; Smiley et al., 2018). According to the 2017 National Nursing Workforce Survey of the USA, the majority 64.2% of the 3,951,001 RN nursing workforce was educated to the baccalaureate and higher degree level as shown in Table 3 (Smiley et al., 2018). And without considering the license categories, it was noted that those with the baccalaureate or higher degree were more than half of the whole USA nursing workforce (52.1%), as shown in Table 4. This was impressive and testament to the impact that supportive education could make in positioning the nursing workforce educational level where they are needed. Where aggregated data was available, it showed that even in these developed countries with flexible educational advancement programs, the advancement numbers for ENs (equivalents LPNs/LVNs) were not large. For example, of the close to one million LPNs/LVNs in the USA, 83.2% had their entry-level qualification for their first USA nursing license as a vocational/practical certificate, more than three-quarters did not pursue a higher level of nursing education (Smiley et al., 2018). However, some peculiar differences exist between the US LPN/LVN and the ENs in Uganda, hence explaining why the advancing LPN/LVN numbers were not as large.

Table 3: Nursing workforce by nursing education level and license category USA (Smiley et al., 2018:p17, 51)

Category	Qualification	Number	% of category	% of baccalaureate & above
LPN 920,743	Vocational/practical certificate	716,338	77.8	0.5
	Diploma	131,666	14.3	
	Associate degree	67,214	7.3	
	Baccalaureate degree	4,604	0.5	
RNs 3,951,001	Diploma	292,374	7.4	64.2
	Associate degree	1,126,035	28.5	
	BSN	1,785,852	45.2	
	Masters	675,621	17.1	
	Doctoral (PhD + DNP)	75,006	1.9	

Since the USA nursing regulation allowed a provision for a nurse who chose to acquire a higher educational level/qualification but maintain a lower cadre license, it necessitated to look at the workforce education level without including their license category, hence table 4.

Table 4: USA Nursing workforce by nursing education level (Smiley et al., 2018: p17, 51).

Nurse education	number	%
Certificate	716,338	14.7
Diploma	424,040	8.7
Associate degree	1,193,249	24.5
Baccalaureate degree	1,790,456	36.7
Master	675,621	13.9
Doctoral	75,006	1.5
Total	4,874,710	100

When nursing workforce data from HICs was compared to countries like Uganda, there was a significant difference in levels of nurse education and their proportions. Countries like USA and Australia showed an EN:RN ratio of 1:4 as shown in Table 5. In the USA alone there were three times more RNs (81%) than their equivalent ENs at slightly less than one million (18.9%). In comparison to the Uganda nursing workforce there was over 70.4 % ENs, and only 29.4% RNs, way below recommendations (Aiken et al., 2018; Nabirye et al., 2014).

Uganda nurse education systems have been slow in responding to the evidence that better educated nurses provide better patient outcomes (Blegen, Goode, Park, Vaughn, & Spetz, 2013) and like other countries there is a shortage of RNs in Uganda (Juraschek et al., 2019; Mbalinda et al., 2013; Nabirye et al., 2014). Due to low uptake of RNs, there is a false sense of having enough of them, however, even if all of them were to be asborted, Uganda would still be way below (WHO, 2020a, 2020b).

Table 5: License of nursing workforce in USA compared to Uganda (Smiley et al., 2018); (UNMC, 2020:p1)

Category	USA			Uganda		
	Number	%	EN:RN ratio	Number	%	EN:RN ratio
LPN/LVN	920,743	18.9	1:4	33,148	70.4	3:1
RN	3,951,001	81.1		13913	29.6	
Total	4,871,744	100		47,061	100	

As early as 1994, the USA number of individuals graduating annually from nursing programs was 80,839 and the lowest cadre in nursing was the smallest group of the nursing workforce, which was a good trend. The majority 65.4% (52,896) were from associate degree programs, 26.5% (21,415) were from baccalaureate degree programs, and only 8% (6,528) were from diploma programs and they were even projected to reduce further (Mood, Snyder, & Pope, 1995). This trend continues to provide a nursing workforce in the USA that meets the recommended proportions between the ENs and RNs but compared with Uganda, the proportions and trends were a total opposite.

In Australia, a similar picture was observed, with the lowest qualified nurses (ENs, Level 2 nurses, LPNs,) being the least of the nursing care workforce. As early as the millennial years, ENs (level two nurses) accounted for only 4.3% of the total Australian health workforce while the RNs accounted for 38.7% (Productivity Commission, 2006). By the time of this study, Australia had a nurse workforce population of 393,916 with an EN:RN ratio of approximately 1:4, as seen in table 6 (NMBA, 2020). These workforce numbers, similar to the USA, formed the general picture of the nursing workforce in the developed world, where the majority of their nursing workforce was educated and licensed at the RN level (AACN, 2019; Juraschek et al., 2019; Smiley et al., 2018; WHO, 2016; WHO, 2017a).

Table 6: License of nursing workforce in Australia (NMBA, 2020:p4)

Category	Number	Percentage	EN: RN ratio
EN	66,021	16.8	1:4
RN	327,895	83.2	

Canada was reported to have had a total supply of regulated nurses at 439,975 in 2019 (CIHI, 2020). This represented 6,159 nurse practitioners, 300,669 registered nurses, 6,050 registered psychiatric nurses and 127,097 licensed practical nurses. With an EN:RN ratio of 3:7, it clearly indicates that the lowest qualified nurses (LPNs) contribute the least percentage of the nursing workforce at 28.9% while the majority 71% were RNs, as shown in Table 7.

Table 7: Canada Nursing workforce statistics (CIHI, 2020:p4)

	Number	Percentage	EN:RN ratio
LPN	127,097	28.9	3:7
RN (RN + NP + RPN)	312,878	71.1	Approx. 1:4
Total	439975	100	

(Key: RPN - Registered Psychiatric Nurse)

The international picture of the nursing workforce was of a highly skilled and highly educated nurse, reflecting increased numbers of RNs and reduced numbers of ENs, LPNs and LVNs; however, this picture was inversely situated for many developing countries including Uganda with more ENs than RNs (CIHI, 2020; Middleton et al., 2014; Munjanja et al., 2005; Nabirye et al., 2014; Nursing and Midwifery Council, 2020; Productivity Commission, 2006; Smiley et al., 2018; Uys, 2013). Further, evidence of workforce proportion differences indicated that 17.4% (124,899) of the UKs register (716,607) was registered into specialist practice, an advancement concept that low resource environments have not even started to develop (NMC, 2020). In comparison to Uganda, there was only a mere approximated 1% advancement into specialised practice, and even then, this advanced practice was not at the same level assessed by the UK's NMC.

There is consensus across international professional organisations, promoting higher numbers of RNs and encouraging developments to support opportunities to advance, creating a more highly qualified nursing workforce at the level of registered nurses (RNs) prepared at

the baccalaureate and graduate degree levels (AACN, 2019; International Council of Nurses, 2007; WHO, 2010). ICN guidance has been to grow a nursing workforce that is both highly educated and skilled, with the rationale that education enhances both clinical competency and care delivery (ICN, 2007). Quality patient care is positively correlated to having a well-educated nursing workforce at this level, hence leading to lower mortality rates, fewer medication errors, and positive care outcomes (Aiken et al., 2008; Blegen et al., 2013; Jones, Erjavec, Viktor, & Hutchings, 2016). As a result, in many HICs, the nursing workforce was at the RN licence category and baccalaureate degree (BSN) or at least the diploma RN or associate degree, meeting the ICN recommendation. This was testament to the contribution of comprehensive and flexible career advancement mechanisms and pathways that support continued post license professional development and educational advancement.

The quest for a highly competent and highly educated nursing workforce has been persistent, as far back as 2010, when the USA Institute of Medicine (IoM) released a landmark report on *The Future of Nursing*, which called for increasing the number of baccalaureate-prepared nurses in the workforce to 80% (IoM, 2010). While this appeared aspirational, careful designs of educational solutions were still needed to move their nursing workforce towards this high target. This was still based on the premise that to respond to the demands of an evolving health care system and meet the changing needs of patients and healthcare clients, nurses needed to achieve higher levels of education. In the 2019 USA nursing workforce survey with updated information for January 2019, revealed that of the 3,951,001 RNs in their workforce, 64.2% or 2,536,479 RNs had a baccalaureate degree or higher. Since the US register captures LPNs with higher qualifications, it can be noted that in relation to the total nursing workforce (RNs and LPNs combined) the proportion with qualifications equal to or higher than the baccalaureate degree was 52.1% (2,541,083). Many HICs have invested in advancement education for their nurses that has been able to meet the advancement needs of their nursing workforce, placing them at the much needed and recommended RN level. This was commendable and quite different from what was observed in low resource countries such as in Uganda (Nabirye et al., 2014).

The enthusiasm and response to the call of improving the education level for the world nursing workforce doesn't seem to have filtered into the low resource environments, maybe due to the workforce structures that still require development (WHO, 2020b). Africa had only one million (4.8%) of the world's 20.7 million nursing workforce by 2016 (WHO, 2016). This landscape hasn't changed much over the years with more recent figures

suggesting that compared to the current global 28 million nursing workforce, Africa still has only slightly above one million nurses, accounting for only 3%, and these are in the lowest qualification levels (WHO, 2020b). Indeed the greatest deficit of nursing workforce is reported in low resource countries in Africa, Southeast Asia, the Eastern Mediterranean region and some parts of Latin America (Mbalinda et al., 2013; WHO, 2020b).

Recommendations urge these countries to educate more nurses at the right level. It was vital that the nursing workforce in these low resource countries be highly trained to the baccalaureate level, to get maximum benefit from their services, and good nursing care outcomes (Aiken et al., 2008; Blegen et al., 2013; Jones et al., 2016). However, majority of the nursing workforce in Africa are at the EN level, a basic beginner level and two levels below the recommended educational level optimised for maximum care outputs (Middleton et al., 2014; Munjanja et al., 2005; Uys, 2013). Given that the baccalaureate level is two levels above the EN, it is not a near-future workable target for most of the low- and middle-income countries in Africa to achieve. However, targeting the diploma (RN level) has been considered an appropriate alternative target with moderate care outcomes and can be achievable for low and middle income countries such as seen in the majority of African countries, (Cho, Ketefian, Barkauskas, & Smith, 2003; Nabirye et al., 2014; Uys, 2013; Uys & Klopper, 2013). For countries like Uganda whose majority nursing workforce is even below the diploma RN, it is imperative that efforts be garnered to accelerate workforce advancement education to the RN.

Some African countries have been able to make progress in changing the educational level of their nursing workforce, although these are not in the low resource country categories. For example, the nurse workforce ratios in South Africa by 2006 were 2:1:4 for EN:RN/M:SRN/M. This meant that the highest qualified nurses (Specialist Registered Nurses/Midwives, SRN/M) were also the majority in practice and their EN:RN ratio at 2:5 was close to that of the developed world (Uys & Klopper, 2013). This was made possible by having educational advancement for the lowest cadre of nurses running efficiently to allow large numbers of least qualified nurses to advance.

1.4 Uganda's nursing workforce

The nursing workforce in Uganda is made up of slightly over 60,000 nurses (including midwives) distributed across six qualification levels and cadres. These are certificate (EN), diploma (RN), higher/advanced diploma, degree level (BSN), Masters level

(MSN) and doctorate level (PhD), (Mbalinda et al., 2013; UNMC, 2019). Table 8 from Ministry of Health Annual Health Sector Performance Report, 2018/2019, highlights their nurse workforce numbers for Uganda.

Table 8: Nurses category, numbers and level of education (MoH Uganda, 2019:p160)

Level of education	Category	Numbers	EN:RN ratio
Certificate	Enrolled Nurse (EN) + Enrolled Comprehensive (ECN)	33,148	3:1
Diploma	Registered Nurse (RN) + Registered Comprehensive Nurse (RCN)	12,451	
Bachelor's degree	Bachelor of Science Nurse (BScN)	1,444	
Masters	Masters Science Nurse (MSN)	33	
Doctoral	PhD	1	
	TOTAL	47,077	

While only 30% of the nursing workforce is RNs, the majority approximately, 70% of the nursing workforce is licensed at enrolment level, the lowest cadre of nursing and qualified at certificate level of education which was the lowest higher education qualification and considered as an associate professional level (Inter-University Council for East Africa, 2015; International Labour Organisation, 2012; Ministry of Education and Sports Uganda, 2016; UNMC, 1996; Uganda Nurses and Midwives Council, 2019). The lower end of the qualification's framework, which is certificate and diploma (ENs & RN diploma) forms the largest part of the nursing workforce in clinical practice while the moderate to higher qualified (BSN, MSN & PhD) situate in academia. Most of the middle to higher cadres (BSN, MSN, PhD) are situated in townships and urban centres while the least qualified nurses (ENs) are in the rural centres. A more educationally appropriate distribution would have seen more nurses at the RN (diploma) and BSN (Aiken et al., 2018; Blegen et al., 2013; Mbalinda et al., 2013; Nabirye et al., 2014).

There are three pre-license nursing routes through which one can become a nurse for the very first time (i.e. EN, RN, BSN), and the majority of admissions into the nursing workforce come from the lowest of them which is the EN route (UNMC, 2018). For example, of the nurses registered in the UNMC records by 2020, the majority were ENs at 333,148 with an EN:RN ratio of 3:1, which is below the WHO and ICN recommendations. The EN route for entry into nursing is larger than the RN and BSN routes combined. Consequently,

the EN cadre has the highest numbers of nurses seeking educational advancement. However, the available educational advancement design is not well matched to their needs. Nursing professionals form the largest contribution to the healthcare workforce in Uganda, at about 70%, (MoH Uganda, 2015b; Uganda Bureau of Statistics, 2002). Considering that nurses are such a significant proportion of the healthcare workforce, their advancement education needs to be well planned and their EN:RN ratios need to follow the recommended proportions. Compared to medicine, by the third to fifth year post license, doctors return to school to specialize or learn new developments in their field (Bennett, 1990), while nurses do not, a trend which must change.

Just before the introduction of the RN level in 1962, most of the nursing workforce were ENs, the highest nursing qualification at the time. Therefore, with the introduction of the RN, it should have led to the growth of the workforce causing RNs to be the majority, however this did not. Since then, EN numbers continued to grow more than the new RN level that had been introduced, while the growth from EN to RN was very slow. For example over a period of 13 years (between 2007-2019), the new entrants into nursing through the EN route were 42,196, while those from the RN route were only 10,906, only one quarter of the ENs (UNMEB, 2020). While the data set did not capture the EN-RN growth over the same period, another available data set on enrolments showed that between 2016-2019 enrolment into EN programs stood at 29,543 while EN-RN was only 4,105, as can be seen in table 9 (UNMEB, 2020). With these growth rates, only one out of seven ENs would grow to the RN.

Table 9: Comparison of enrolments into EN and EN-RN programs between 2016-2019 (UNMEB, 2020:p7)

Program		2019	2018	2017	2016	Total		% of enrolment	Average annual enrolment
EN	CN (Certificate in Nursing)	8,446	5,432	4,975	5,604	24,457	29,543	88	7,386
	CCN (Certificate in Comprehensive Nursing)	1,290	1,325	1,402	1,069	5,086			
EN-RN	DNE (Diploma Nursing Extension)	1,167	976	770	825	3,738	4,105	12	1,026
	DCNE (Diploma Comprehensive Nursing Extension)	51	103	72	141	367			

From Table 9 above the percentage of enrolments for EN-RN within the study programs stands at a very low 12%. If this is matched to the UNMC register to compare the number of ENs against their enrolment in EN-RN advancement programs, it reinforces a slow advancement rate. With the UNMC current register showing total number of ENs at 33,148, and the annual enrolment into EN-RN advancement programs standing at 1,026, it clearly shows that it will take at least 32 years for these current ENs to advance. But because the rate of enrolment to EN programs is much higher, in the same period of 32 years, many more ENs will have been produced than those that would have advanced. Therefore, ingenious ways to accelerate EN-RN educational advancement need to be found to improve the current low rates and reduce the ‘bottle neck’ of increasing numbers of ENs. With the introduction of the RN, it was anticipated that a significant proportion of the EN workforce would grow to the RN level, but this did not happen. Even later in 1993 when the BSN was introduced, the same pattern was noticed with low uptake of the BSN program (Abedi, Ogwal, Pintye, Nabirye, & Hagopian, 2019; MoH Uganda, 2019). This continued low uptake of nurses’ educational advancement has resulted in most of the nursing workforce remaining at low ranks with the majority being ENs.

Uganda and the East Africa region are demanding a highly competent nurse due to the continued rapid changes in healthcare such as the emergence of new diseases and changing disease patterns (Nabirye et al., 2014). The growth of nursing has been slow, it was expected that the majority of the nursing workforce should have transitioned to moderate or higher

levels of qualification in nursing (BSN, MSN), but this has not happened (MoH Uganda, 2019; Nabirye et al., 2014). Despite the introduction of higher qualifications and cadres, such as the RN, BSN and MSN, the majority of the nursing workforce in Uganda remains at EN, the lowest cadre, with the BSN and MSN almost non-existent (Mbalinda et al., 2013; MoH Uganda, 2019). The intention of providing various career paths was so that ENs could advance to the RN hence raising the education level of the nursing workforce (Ministry of Public Service Uganda, 2017; UNMC, 2018; Uys, Amandu, Mwizerwa, & Erejo, 2010). Even with the position of Uganda as a low resource/developing country, it should have been expected that at least the majority of nurses would have advanced to RNs (diploma), but this did not happen and the majority of the country's workforce remained at the EN which is an associate level (ILO, 2012; MoH Uganda, 2019; Munjanja et al., 2005; UNMC, 2018). The educational developments providing routes to higher educational advancements in nursing have not translated into significant shift to a higher qualified nursing workforce. Yet in the same environment, changes demanding a better qualified nurse have occurred, such as new diseases, new treatments, new healthcare challenges, and expanding populations (Abedi et al., 2019; Nabirye et al., 2014).

The situation is not unique to Uganda alone, as neighbouring Kenya reported in 2006 that the nursing workforce was more than two thirds ENs (27,245) and only one third RNs (11,770), (MoH Kenya, 2015; Riley et al., 2007). However, over the last 10 years Kenya made a deliberate effort to accelerate EN-RN advancement, and decelerate pre-service EN training, which increased the level of education of their nursing workforce (MoH Kenya, 2012). This positive growth in the qualification level of the nursing workforce continued, reaching a point where the RNs outnumbered the ENs with RNs being 70% and the ENs being only 30% of the nursing workforce (MoH Kenya, 2015; MoH Kenya, 2014). The annual student enrolments changed significantly, with student enrolment to RN and BSN programs increasing to greater than that of ENs (MoH Kenya, 2012; MoH Kenya, 2015). By 2012, the Kenya national annual enrolment to certificate level programs (ENs) was only 278 students while diploma level (RN) was 3,568 and the BSN at 400, as shown in Table 10. In comparison to Uganda, the picture is quite different for the same year (2012) with EN at 1,465, and RN at 531 (UNMEB, 2017). Uganda's enrolment and output into EN was more than double that of RN. Simply put, Uganda was growing more of the less competent nursing workforce cadres (ENs), hence a need to re-direct nursing workforce growth to the recommended cadre which is RN (Aiken et al., 2018; Frenk et al., 2010; Nabirye et al., 2014).

Although there was progress made by the Kenya ENs, the approach used of distance learning programme based on printed textbooks and later e-learning, was not seen as the best approach as it was heavily criticised, having had a high dropout and failure rate (Bigirwa, Ndawula, & Naluwemba, 2020c; Nguku, 2009). Further the scare of an impending phasing of the cadre was looming, strengthened by the deliberate decision to significantly reduce training of new preservice ENs (MoH Kenya, 2012). This forced Kenya’s ENs to take whatever measure was available. It was not necessarily a choice but a desperate movement with no clear demonstration of concept testing, utilisation of users and evidence in its development. Although the e-learning approach produced good results, it was more of the end justifies the means type of decision than a lifetime education program design that ENs should rely on for their career advancement. It should also be acknowledged that the traditional methods were also available and continued to support the EN-RN advancement. Even when the same was tested in Uganda for the enrolled midwife to the registered midwife program, the uptake remained low with students and faculty disliking it, as the quality of online learning was rated very low at 44.9% (Bigirwa et al., 2020c).

Table 10: Comparison of Nursing cadre entry for Uganda and Kenya by 2012 (MoH Kenya, 2012)

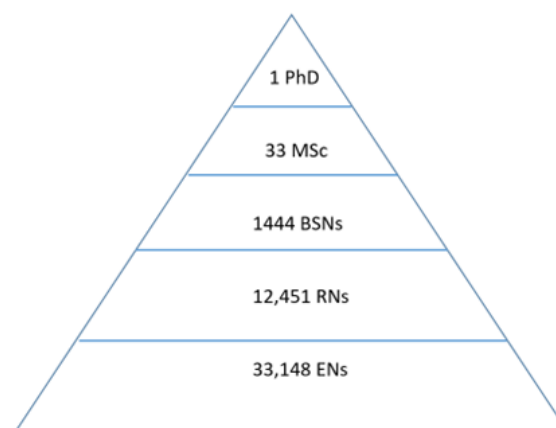
Program	Kenya		Uganda	
	Number	%	Number	%
EN	242	9	1,465	71
RN	2,448	91	581	28
BSN	218	8	7	0.34
Total	2,690	100	2,053	100

Following educational advancement developments that have happened over time, such as the introduction of the RN in the 1960s, the BScN in 1993, it is important to pay attention to their uptake and contribution to the workforce proportions. For example, it is not clear why ENs are still the largest nursing workforce cadre after the RN was introduced fifty years ago, and the BSN nearly thirty years ago. The nursing workforce outlook should have changed by now with more RNs than ENs. If new developments in nursing career are not embraced, then this undermines the efforts of career advancement, (Uys & Klopper, 2013). Knowing that higher rates of RN staffing are associated with better care outcomes and reduction in adverse outcomes (Aiken et al., 2018; Cho et al., 2003; Kutney-Lee, Sloane, & Aiken, 2013), the Uganda nursing workforce should by now be more RNs and BScNs than ENs. Even though there may be national budgetary limitations to drive these changes, the

nursing education system should not be tied by these limitations and should have been ingenious to move ahead in driving the change needed in the nursing workforce, (Supporting Policy Engagement for Evidence-based Decisions, 2017). As well, strategic position statements need to be issued in support of the needed nursing workforce changes, and these should be informed by evidence, such as what this report will produce. Considering that ENs are the first and majority point of contact for formal health care in communities, one wonders how much the opportunity cost is, for keeping frontline health care workers least qualified. This may be partly associated to the late diagnoses seen in healthcare (Galukande, Mirembe, & Wabinga, 2014; Kithuci, Nyariki, & Kariuki, 2017).

The Ugandan nursing workforce pyramid has a limited number of expert qualified nurses at and above RN grade, with an abundance of low-level skilled nurses, as shown in Figure 1, (UNMC, 2016). This has serious implications for the quality, expertise and delivery of nursing care alongside patient care outcomes.

Figure 1: Ugandan Nursing Workforce Pyramid (UNMC, 2020)



When examining the characteristics of the Ugandan nursing workforce, the majority 88% was female (Spero et al., 2011; UNMEB, 2020), mirroring the historic and international picture (Auerbach, Buerhaus, Staiger, & Skinner, 2017; Auerbach, Staiger, Muench, & Buerhaus, 2012; NMBA, 2020; NMC, 2020; Smiley et al., 2018). Many low resource environments including Uganda, are patriarchal, which could have considerable influence for a female EN negotiating at a family level, time out for their educational advancement. Therefore, planning educational advancement for the nursing workforce will need to consider family, work, cultural and contextual realities. Ugandan nurses born in rural areas preferred to locate and work back in those areas following completion of training (Nguyen et al., 2008; Rockers et al., 2012; Zakumumpa, 2020). Wider research highlights health workers

(including nurses) generally tended to work in regions in which they were born or completed their training (Hagopian, Zuyderduin, Kyobutungi, & Yumkella, 2009). Often advancement education is offered within urban settings, residential programmes making them inaccessible locally for ENs in rural areas. This evidence is useful to inform designs, locations, and choices of future advancement education. The nursing workforce was young, rural based, predominantly female and at lowest level of the qualifications framework/cadre, therefore, any advancement design should consider these realities (Nguyen et al., 2008). In practice, these demographics, and the needs of the ENs have not been considered in the design of current EN advancement education.

Many ENs desired to advance their career to RN (UNMC, 2015; VSO, 2012a), but flexible programs that met their needs remained largely inaccessible or unavailable. Within the developed world (Canada, USA, Europe, and Australia), when practice level nurses had a similar need, many different opportunities for support and educational designs were introduced (Eley, Francis, & Hegney, 2013; Hudson et al., 2014; Price & Reichert, 2017). Support opportunities included employer flexibility, various education funding networks, appropriately scheduled programs and closely fitting flexible work-based advancement programs. It is unclear why similar initiatives have not been introduced in Uganda, at least the non-financial ones, such as flexible education designs should have been established. A confounding problem is a lack of robust evidence to inform program developers, highlighting the needs of ENs and how best to design programs that target ENs who are working throughout the whole country in urban and rural communities, within a low resource context environment. Various position statements on career development in nursing recommended that flexible career structures and supported education should be present to encourage nursing career advancement (ICN, 2007; WHO, 2017b; WHO, 2020b). However, these attributes continue to be absent in the EN-RN advancement education, hence the majority of EN nursing workforce remain at their first entry level cadre, with a limited scope of practice, and against their aspirations.

1.5 ENs' scope of practice

The EN is an important and licensed member of the nursing and healthcare workforce, although the scope of their practice is limited. The Scope of Practice for Nurses and Midwives in Uganda, (2017) identifies the scope of service for an EN as revolving around patient assessment and various levels of supportive management, with some additional

activities instructed and supervised by the RN (MoH Uganda, 2018b). The published scheme of service also outlines their various roles and responsibilities as shown in Table 11 (Ministry of Public Service Uganda, 2017).

Table 11: Key role of EN and RN (MoPS, 2017:p55&67)

Key role of EN	Key role of RN
<ul style="list-style-type: none"> • Participate in continuous coverage on wards/units • Administer treatment as prescribed • Carry out nursing procedures. • Carry out observations, keep proper records and ensure their safe custody. • Participate in ward rounds. • Receive and register patients/clients. • Prepare patients for meals and participate in serving them. • Adhere to aseptic procedures • Adhere to ethical professional conduct. • Carry out health education • Participate in primary health care activities 	<ul style="list-style-type: none"> • Provide quality nursing and midwifery services • Prepare and submit reports • Allocate and supervise duties of ENs • Coach and mentor ENs. • Participate in research activities for evidence-based practice • Implement nursing protocols • Manage performance of ENs. • Account for supplies and drugs. • Conduct Primary Health Care and health education. • Strictly adhere to code of conduct and ethics.

While there are some manual tasks that both the EN and RN perform, the RN operates at a more senior and more extensive level compared to the EN. In those countries where the scope of practice has been comprehensively developed, the gains of advancing the nursing workforce to RN with a wider and deeper scope of practice are evident, with RNs taking on more responsibility (Kenny & Duckett, 2005; Productivity Commission, 2006). Often, depending on the context of the healthcare practice environment, there can be a blurring of the scope, particularly if one is looking at clinical skill mastery, rather than holistic care and its management (Oxtoby, 2009; Schluter, Seaton, & Chaboyer, 2011).

The Uganda scheme of service for nurses and midwives sets the job descriptions for the nursing profession in the public sector and is adopted by many private players as a benchmark. Within this scheme the RN is charged with mandates that the EN cannot undertake and is not qualified or trained to do. These include, but not limited to, aspects of care quality assessment and assurance, implementation of care protocols, performance

management, and facility management (MoPS, 2017). The EN primarily works under the instruction of an RN usually undertaking manual tasks.

In reality, irrespective of the scope of practice, ENs in clinical practice often make critical care decisions beyond their scope and without the presence of RNs (Dovlo, 2005; MoH Uganda, 2018a). This has been associated with the concept of task shifting and task sharing that has transferred an increase in roles to ENs, such as HIV anti-retroviral management, (Baine & Kasangaki, 2014; Dambisya & Matinhure, 2012; Kiweewa et al., 2013; McPake & Mensah, 2008; Nabudere, Asiimwe, & Mijumbi, 2011). The underpinning skill level of ENs has been questioned, given that they form the majority of the healthcare workforce, (Nabirye et al., 2014; UBOS, 2002) and often drive care delivery within communities independently (Lakati, Ngatia, Mbindyo, Mukami, & Oywer, 2012; MoPS, 2017). Evidence indicates the lower-qualified nurses such as ENs, are less knowledgeable on ethics and have a lower impact on improving the quality of care and patient outcomes (Aiken et al., 2008; Lakati et al., 2012; Osingada et al., 2015). Yet, ENs are still the first point of healthcare contact for many rural communities and the limitations associated with their scope of practice may lead to missed care opportunities (Kenny & Duckett, 2005; Kithuci et al., 2017; Matsiko & Kiwanuka, 2003). It may be possible to capitalize on the experience of these ENs, to improve the overall delivery of healthcare services to rural communities, by supporting them to advance to RN and upgrading the primary healthcare staffing norms (Kenny & Duckett, 2005; Suttle & McMillan, 2009).

1.6 Deployment of nurses within the healthcare system

Both the scheme of service for nursing and the staffing norms give guidance on where nurses work, what they do and their position numbers. Nurses are deployed throughout the health care system on a hierarchical model of nine ranked positions with EN level being the lowest and commissioner nursing being the highest, (MoPS, 2017). From bottom to top, the healthcare facilities where nurses are deployed include the Health Centre II (HCII); Health Centre III (HCIII); Health Centre IV (HCIV), General Hospital (GH); Regional Referral Hospital (RRH), and National Referral Hospital (NRH) (MoH Uganda, 2015a).

Table 12 indicates the numbers and distribution of these facilities where ENs and RNs work across the regions of Uganda, considering both public and Private Not for Profit (PNFP) (MoH Uganda, 2015a): p39). RNs are deployed from the HCIII right to the top of the health care system at the NRHs. They are not deployed at the HCII which is the most primary

health care facility, of the health care system, situated in almost every parish. ENs are deployed and work throughout the whole health care system including HCII, although may have skill limitations when it comes to specialized facilities. The lower health care facilities (HCII) are closer to communities and provide the first level of interaction between the people and formal health sector. ENs serve independently at this level, generally undertaking duties which include advocacy, disease prevention, health promotion, health education, counselling, therapeutic care, co-ordination and collaboration of patient care, research, and administration. Indeed, some communities only have access to this level of health care.

Table 12: Health facilities where nurses work (public and private) by region (2015), (MoH Uganda, 2015a)

Region	HCII	HCIII	HCIV	GH	RRH	NRH	Clinic	Total
Central	1065	318	51	53	3	2	645	2137
Eastern	618	324	48	30	3	0	34	1057
Northern	484	271	31	27	4	0	32	849
Western	774	376	67	34	4	0	120	1375
Total	2941	1289	197	144	14	2	831	5418
	←————— ENs —————→							
		←————— RNs —————→						

Whilst the scheme for nurses recognizes the need for career and professional advancement, targeting and scaling up the skills of ENs and for them to continue working and providing higher level skills at the HCII and HCIII, will in turn improve care packages and health outcomes for local and rural communities (Gutierrez, Teshome, & Neilson, 2018; Rahimzai, Naeem, Holschneider, & Hekmati, 2014). Therefore, avenues for accelerating their educational advancement without hampering care are needed.

1.7 Phasing out ENs

A consultation report on the regional guidelines for the harmonization of nursing and midwifery education in the East Africa Region recommended phasing out the EN cadre (Nabirye et al., 2014; SPEED, 2016; 2017). As a result of the limited scope of the EN role, the current rigors of practice and the challenges in healthcare, some countries have made the decision to either upgrade significant proportions of the EN workforce to RN or phase them out. In the neighbouring country of Kenya, the phasing out debate was considered in 2003 and a target was set to upgrade the clinical skills of the then country’s 26,000 ENs to the RN by 2010 (MoH Kenya, 2012; Nguku, 2009). Similarly, because of the limited scope of the role, the trend of phasing out ENs, has been considered in other parts of sub-Saharan Africa

(Munjanja et al., 2005), including Uganda although the decision to phase out the role in Uganda was not implemented. The pressure for Ugandan ENs to upgrade their qualification to RN-level has increased, similar to the experience of ENs in the UK and Australia when the radical nursing education Project 2000 strategy was adopted (Birungi, 2015; Kenny & Duckett, 2005; National Audit Office, 1992). Uganda's decision to phase out ENs was driven by a number of reasons including, the need to professionalize nursing but more so the overwhelming evidence that the use of higher qualified nurses, was associated with better health outcomes for patients, shorter hospital stays, and reduced patient morbidity (Aiken et al., 2008; Nabirye et al., 2014; Nguyen, 2014; SPEED, 2017; Suttle & McMillan, 2009). The professionalization and quality of care rationale sought to strengthen the nursing profession to respond to and meet the needs of the populations served. The limited EN scope of practice could no longer effectively meet the needs of patients, given the growing demand for accessible and affordable high-quality care and the need for improved access to care (Nabirye et al., 2014; SPEED, 2017). Although discussion to phase out the EN role abated in Uganda, the drivers for phasing out the role and requirements for advancement are still present and relevant, so the discussion is set to re-emerge in the future. The nurse education system should respond to this need and provide EN-RN advancement solutions that are synchronised to the ENs demographic realities. The earlier nursing educators respond to this need, the better. To facilitate this change, an evidence base is needed, by higher education institutions, to inform the development and implementation of appropriate education programs that will effectively accommodate large numbers of EN advancement. The current higher education offer was inadequate and inappropriate as all EN-RN educational advancement programs were fulltime and residential. To meet the need for EN career advancement, Uganda requires flexible advancement programs that are equitable, accessible and support the needs of working ENs.

1.8 Nursing education in Uganda

As stated earlier, nursing education in Uganda started in the second decade of the 20th century following the work of a nurse from the Church Missionary Society (CMS), Katherine Timpson, working in the Mengo area (Cook, 1930; Cook et al., 1986). The Mengo area had a healthcare provision facility that later became a private faith-based hospital called Mengo (Mengo Hospital, 2018). Katherine started the training of nurses in 1928 and later founded

the Nurses Training College in 1931, with the first EN class qualifying in 1933, (Nabirye et al., 2014). The training was fulltime and residential, and this model continues to date.

Similarly, in neighbouring Tanzania, nursing training started in 1939, and in both Kenya and Tanzania the nursing profession was being initiated by missionary nurses and midwives (Moyo & Mhamela, 2011; Ranger, 1981). Uganda offered a double qualification of nurse-midwife, with a course duration of three years. The underlying idea was to produce highly competent professionals skilled in both nursing and midwifery, considered the most practical, efficient and useful healthcare workforce for the communities and hospitals they served (Cook, 1930).

With regular program upgrades, the product of nurse training improved and advanced with the first ENs, as we know them today, having qualified in the 1950s, from a variety of missionary and government schools that had been introduced. Since then to date, the country has seen extensive progress in nursing education, with the development and establishment of many different types of programs and schools allowing for three pre-license programs for entering nursing; plus opportunities for upgrading vertically from EN to RN, BSN, and MSN including horizontally, from nursing to midwifery. The advancement to RN started in 1962 and later the advancement to BSN in 1993 (Drake & Mutabaazi, 2010). Postgraduate advancement to MSN commenced in 2003, although this was initially on a low scale and limited to university-based nursing faculty development (Mbalinda et al., 2013). A similar trend was noted in other sub-Sahara African countries, where institutionalized nurse training started with EN programs growing from hospital-based schools to independent colleges and universities (ICN, 2005; Uys, 2013). Nursing programs, curricula, and schools in Uganda have evolved over time to produce a plethora of nurse education institutions today (Abedi et al., 2019; Amandu et al., 2013; Kaye et al., 2011; Kemp & Tindiweegi, 2001; Kiguli-Malwadde et al., 2006; Mbalinda et al., 2013; Okware & Ngaka, 2017; UNMC, 2017b).

Evolution provided opportunities for nuances in curricula revisions, new schools, new programs, new cadres, and new stakeholders in nurse education. Moving from one dominated by the missionaries to one with multiple players including the state, entrepreneurs, and all manner of other collaborative establishments (Amandu et al., 2013; Herrera, Luboga, Kentaro, Zomorodian, & Hagopian, 2012; UNMC, 2010; Uys et al., 2010). However, the structure of the EN-RN advancement program remained unchanged (Mbalinda et al., 2013; Nabirye et al., 2014). Further, the role of the professional regulator (UNMC) regarding regulation of nurse education has also evolved over time. Initially the UNMC directly

regulated nursing education including program development and assessments. However, this changed in 1998 when nursing education was moved from the ministry of health and nursing council to the ministry of education and sports. Consequently, the role of the UNMC in regulating nursing education shifted from a primary position to a secondary.

The current nursing education system is supported by a number of training schools and universities that offer certificate, diploma, advanced diploma, degree and postgraduate courses, (Mbalinda et al., 2013). There are three pre-license entry-level programs at certificate, diploma, and bachelor's degree. The certificate level training program (EN) is the cheapest and quickest route to acquiring a nursing practice license hence providing an opportunity for income. The EN program duration is two and a half years, widely available across the county's public and private schools, and the most accessed, generating nearly three-quarters of the nursing workforce. Other routes are the diploma which takes three years, and the BSN which takes five years (four in school and one for internship) (Abedi et al., 2019; Mbalinda et al., 2013; Nabirye et al., 2014). At the diploma and degree levels, the system facilitates educational advancement and professional development for upgrading nurses which is commonly referred to as 'extension' for the diploma and 'top-up or completion' for the degree in nursing programs. The advancement programs leading to the diploma, last 18 months on full-time study, while the top-up to the degree varies between two to four years depending on the program model being part-time or full time. In addition, ENs are required to accumulate two years of service practice (after licensure) before being eligible to upgrade, a guideline that restricts seamless educational advancement.

There needs to be support for different types of nursing education beyond traditional models, including re-examining policies/guidelines that restrict innovation (Klein-Collins, 2011b). ENs need extension programs that support them to advance to the diploma level (Mbalinda et al., 2013; Roberts, 2008). The Nurses and Midwives Act (UNMC, 1996) and scheme of service, (MoPS, 2017) stipulate that if ENs are to grow in their career to the RN (diploma), they have to undergo a fulltime training for eighteen months (one and a half years). Evidence and international guidelines suggest these programs need to be flexible (Ayer & Smith, 1998, 2017; Calder & McCollum, 2013; Choitz & Prince, 2008; ICN, 2007; WHO, 2003; WHO, 2010; WHO, 2017b; WHO, 2020a). The diploma level program commenced in 1962 and led to the need for ENs to advance/upgrade to the RN (Drake & Mutabaazi, 2010; Mulago School of Nursing and Midwifery, 2020). All the upgrading

programs were fulltime, residential and mainly sponsored by the government (Matsiko & Kiwanuka, 2003).

There is no clear rationale why the programs took on this inflexible design from start. It seems that there is lack of strong evidence to generate the discourse on training designs becoming flexible. Initially, there was only one school, Mulago School of Nursing and Midwifery, that provided a nursing upgrade program, and in the early 1970s, three more schools joined, and now about 41 schools provide this opportunity (Mbalinda et al., 2013; UNMC, 2017b; UNMEB, 2017). However, they have all followed the same initial program design/structure. Since the regulation initially provided for the fulltime design, it has been limiting to go beyond this provision (UNMC, 1996). However, generation of evidence to present the case and evidence for change is needed.

The increase in schools offering the program was welcomed, but there was also the need to develop flexible programs that would allow ENs to work and study, the later seems to have been missed (Brownie et al., 2016). The programs being solely residential and fulltime reduced access for those ENs who worked full-time, had families, and didn't want to be separated from their respective families or give up work (Hagopian et al., 2009; Nguyen et al., 2008). This structure for the pre-service education design was maintained and imposed for the in-service EN-RN advancement, yet it was disproportionate for the EN available time and resources. Consequently, ENs have viewed it as a restrictive educational advancement design, hence evidence is needed to build a case for change and to propose workable options. However, non-residential and flexible designs were initially introduced in 2001 by the Aga Khan University through their advanced nursing studies program (Brownie et al., 2016). Slowly, some institutions have begun to offer flexible scheduling for the RN-BSN, but not for the EN-RN advancement. The prevailing regulation does not provide for a flexibly scheduled EN-RN program. Despite the demand for increased access to EN-RN advancement programs, there has been little development in the nursing education sector to address the issue of flexible programs or addressing access issues. Most Ugandan EN-RN programs remain inaccessible, full-time and residential, driven on the private scheme (Matsiko & Kiwanuka, 2003; Ssempebwa & Ssegawa, 2013). To add to these issues there is no robust evidence to expose the plight of the ENs and their advancement needs.

1.9 Nursing schools

The Ugandan government reduced its investment to support health worker training, leaving the financing of health worker education mainly in the private domain. There are now more private nursing, midwifery, allied and medical schools than government-owned schools (MoH Uganda, 2015b). As a result, private health-training institutions have increased exponentially in the last 10 years to take advantage of the high demand for nurse training in Uganda. Most nursing schools are privately owned, financed by tuition fees collected from students, similar to other developing countries (Clifford, Miller, Stasz, Sam, & Kumar, 2012). Out of the more than 100 nursing schools in Uganda, only 20% are government-owned, the remaining schools being owned by faith-based Non-Government Organisations (NGOs) and private entrepreneurs. Further, those few government-owned schools also run private courses over the numbers financed by the government (World Bank, 2012). For private and public schools, the income from private students accounts for more than 40% of school revenue (World Bank, 2012). The private schools' income from students was higher than for public schools. The heavy reliance on tuition fees from students for financing the school's expenses, has for years limited and disadvantaged populations from accessing nurse training, as a result of the high cost (Matsiko & Kiwanuka, 2003; Ssempebwa & Ssegawa, 2013).

Privatized nurse education was a result of the education liberalization policy reforms of the 1990s (Clifford et al., 2012; Ward, Penny, & Read, 2006). This allowed private entrants in higher education, leading to a privatized nursing workforce production system (MUSPH, 2018), and the government failed to respond and increase funded schools, or provide scholarships for those who could not afford the fees. The challenge remained that health training institutions including nursing schools, were underfunded creating additional complications and inaccessibility towards the educational advancement for ENs (MoE&S, 2012a; NCHE, 2013; Ssempebwa & Ssegawa, 2013).

Further, majority of the nursing schools offering EN-RN advancement programs are placed within a radius of 50 kms around the capital and main business city, hence inaccessible to the majority of EN population spread over the whole country. For EN advancement education to be successful, the geographic location needs to be considered to provide a regional/district-based program to improve access and uptake.

1.10 Advancement tuition fees

Over the years there has been a steady increase in tuition fees and school requirements for EN-RN advancing education (MoH Uganda, 2018a). This was motivated by the Education Policy Reforms and particularly the education privatization policy of the 1990s (Clifford et al., 2012; Ward et al., 2006). Most of nurse education shifted to private funding, consequently the cost of education has increased through direct and indirect levies. Private institutions tend to charge more for their education than public institutions (Chien & Montjouridès, 2016). In 2000/2001 academic year, the cost of tuition for an EN at a public-funded nursing school was UGX 450,000 per annum (about USD 122 at current 2022 exchange) (tuition only), while for the private sponsorship was UGX 540,000 (about USD 146 at current exchange) for tuition and UGX 360,000 (about USD 97 at current exchange) for boarding annually, (Matsiko & Kiwanuka, 2003). In 2005/2006, the unit cost for most Health sector institutions including nursing was UGX 584,784 (about USD 158 at current exchange) per annum. This had more than tripled by the 2011/2012 academic year with a unit cost of UGX 2,167,887 (about USD 586 at current exchange) for public institutions and UGX 2,361,199 (about USD 638 at current exchange) for private institutions (NCHE, 2013). The current (2022) cost of nursing education (tuition, accommodation, and other fees) for most of the nursing schools is about 4,960,000 (about USD 1,340 at current exchange) per year.

As shown in table 13, despite the growth in the cost of nursing education, the ENs salary and benefits in the country are not keeping pace, wages have remained low and they are some of the poorest paid roles in Africa (Guzi & Kahanec, 2019; Matsiko, 2010; Rockers, Jaskiewicz, Wurts, & Mgomella, 2011; Vujicic, Zurn, Diallo, Adams, & Dal Poz, 2004), further widening the gap between income and affordability/cost of advancement education (Munjanja et al., 2005). For example, in 2003, the EN annual salary was UGX 2,500,000 (about USD 676 at current exchange) (Matsiko & Kiwanuka, 2003). Fifteen years later, the annual salary has only increased to UGX 7,300,000. This is not surprising as Uganda has been reported among the bottom 3 countries in Africa that adjust their minimum wages less frequently and in which the minimum wages were not adjusted between 2020-2010 (ILO, 2020). While the annual school tuition fees have increased by between 600 - 800%, the EN salary has not kept up, only increased by 290%, so advancement is no longer affordable (Matsiko & Kiwanuka, 2003; Ministry of Public Service Uganda, 2019b). Even with the recent EN salary increase (to a gross of USD 165 per month) (MoPS, 2019b), ENs cannot support living expenses (Guzi & Kahanec, 2019; VSO, 2012a). Consequently, saving for

school to be able to afford advancement education later, should it be that they have to go full-time and stop working was not possible (Guzi & Kahanec, 2019; ILO, 2020; VSO, 2012a).

Table 13: Growth in annual tuition and salary

Year	Annual Tuition		Annual Income	Tuition Vs salary growth
	Public	Private		
2000/2001	UGX 450,000 (USD 122)	UGX 900,000 (USD 243)	UGX 2,500,000 (USD 676)	Salary = 292% Tuition Public =1102% Private 551% Average 826%
2011/2012	UGX 2,167,887 (USD 586)	UGX 2,361,199 (USD 638)	UGX 5,400,000 (USD 1459)	
2021/2022	4,960,000 (USD 1,340)	4,960,000 (USD 1,340)	UGX 7,300,000 (USD 1972)	

In an attempt to assist low paid ENs and other struggling students to advance their career, the government created the Uganda Higher Education Students Financing Board (HESFB), which provides student loans to enable them access higher education at affordable rates (MoE&S, 2012b). Nursing was and still is one of the professions that are eligible through its certificate, diploma, and bachelor's programs. Therefore, through this HESFB, ENs can seek tuition loans. While this provides an access opportunity, the resource is limited, and can only support a small proportion of applicants, below the number of ENs needed to advance at scale. In 2019/2020 financial year, only 13 EN-RN students accessed the loan (Higher Education Students Financing Board, 2020). New ways to facilitate and support the financing of the EN-RN advancement education are needed and could help to improve EN access to RN programs.

1.11 Taking ENs from the workplace

The goal of Uganda's Health Sector Development Plan (2015-2020) was to achieve universal health coverage, for which nurses play a major role in driving, as they form the largest component and ENs in particular deliver 70% of healthcare, in rural areas (MoH Uganda, 2015a). It makes no sense then to deliver advancement education within a full-time framework that takes them away from the workplace for a prolonged duration. This directly impacts on service delivery, especially in rural areas where Health Centre II's, staffed

predominantly by ENs, are the first access point to healthcare services. Consequently, providing only a full-time program approach for most of the EN-RN advancement education deprives the health care environment of a much-needed human resource, compromising service delivery. In a context where the healthcare workforce is far below the WHO recommendations, the strain of accommodating ENs to leave for full-time education can be a challenge to the quality of patient care and realization of healthcare targets (MoH Uganda, 2018a; Saralegui-Gainza et al., 2021; Willcox et al., 2015). In addition, staffing positions are not always filled to capacity, the MoH indicated that staffing levels were at 69% in 2014 and had targeted to achieve 70% by 2018 (MoH Uganda, 2018a) adding further pressure in the workplace. For example, at that time the largest hospital to employ nurses in the country, the Mulago National Referral Hospital, had 1,930 approved nursing staff positions of which only 873 (45.2%) were filled (MoH Uganda, 2018a). A further challenge was that current staffing norms did not even match the population size for target served communities, so workload already exceeded available staff resources (MoH Uganda, 2018a). Therefore, a full-time EN-RN advancement education framework simply fails to match the needs of ENs in practice and is counterproductive for the universal health coverage. This reinforces the need to build more robust EN-RN advancement education frameworks/designs.

1.12 Study leave

Within the current design, paid study leave was a lifeline to EN advancement. Practices to access study leave were complex (SPEED, 2017; VSO, 2012), even when study leave was sanctioned, the demands in practice often interrupted, hence preventing its smooth utilization. Negotiating study leave was difficult and took a long time (Rapley, Nathan, & Davidson, 2006). In Uganda, there is an established formal process to seek study leave. However, the process is long, bureaucratic, and often involves navigating multi-layers of authority for approval, which was stressful for the EN who was situated at the bottom of the ranks (Brownie et al., 2019). There is a well-articulated national public service training policy (MoPS, 2006), specifically supporting working public servants, and serves as a benchmark for the private sector. The policy was well structured and provided many avenues for people returning to school. While it acknowledged the constraint of training resources including study leave, it provided a range of options that candidates could consider for funding and time. Beyond the traditional full-time paid study leave route, it suggested that people could study in their non-work time. In part, it stated that:

“...all government officials shall be allowed to undertake part-time courses regardless of the duration, as long as they are relevant and do not interfere with the fulfilment of official duties” (MoPS, 2006, p. 7).

Staff were encouraged to sponsor themselves through the self-sponsored route and this was an option that ENs, unable to access paid study leave for full-time programs, could opt for. Despite this, without nursing schools providing flexible accessible options there was no other choice available for those ENs who could not access paid study leave. Consequently, career success in the current system was dependent on the acquisition of paid study leave and scholarships, both of which were in limited supply (MoPS, 2006; VSO, 2012a).

1.13 Summary of EN advancement issues

This chapter has highlighted a number of converging issues in Uganda which are directly impacting on the ability of ENs to advance their career to RN, although the evidence of EN experiences is limited, it is perceived to be their aspiration to advance. Key barriers include:

- Lack of government sponsorship and limited financial support provided to ENs to fund their advancement education.
- Low EN wages that barely cover the cost of living and provide no flexibility to save money to self-fund an advancement program.
- Lack of sufficient staff in clinical practice to support the secondment of ENs out of practice to access education.
- Lack of flexible and suitable advancement education programmes that are accessible for working ENs in various geographic locations of the country.

The overall slow investment in the growth of the RN workforce across Uganda has resulted in a complete ‘bottle neck’ of lower cadre nurses which impacts directly on the quality of care provided across many different health contexts (WHO, 2010). Without the resources to fund education programmes there are just not sufficient numbers of RNs available to lead nursing care, indeed the greatest deficit of the nursing workforce is reported in low resource countries (WHO, 2020b). Responding to recommendations (Calder & McCollum, 2013; Kenny & Duckett, 2005; Melrose & Gordon, 2011; Nguyen, 2015) HICs invested in flexible and new ways to educate the nursing workforce to a baccalaureate level, sponsored at scale

by governments, which would be impossible to replicate in countries like Uganda, where resources are limited (MoE&S Uganda, 2012b). Many ENs felt oppressed, they had little choice but to remain at this low level for many years, in an era where the nursing workforce needs to career advance quickly and efficiently, to keep up with the ever changing healthcare demands (Nabirye et al., 2014; WHO, 2010).

One of the most notable blockages to EN advancement was the lack of flexible nursing education programmes, with Uganda still providing nurse education based on a model from the 1930's. This issue resonated with the researcher, a senior nurse educator and was the drive and motivation for the research study.

1.14 Motivation and reflection

I work as a nurse educator in a nursing school based in Uganda, I'm in a position now to influence and make a difference to what and how nursing education programmes are both developed and delivered. I have watched the careers of excellent EN nurses stifled, due to lack of advancement opportunities. The motivation of this research is to make a small contribution, seeking to identify an evidence base to inform and influence how to develop education to meet the needs of ENs.

Indeed, my personal drive draws on my career in nursing education and is influenced, by Paulo Freire's work - the pedagogy of the oppressed (Freire, 1972), which gives hope that complex educational challenges can be overcome. As a nurse educator, I'm motivated to see an efficient equitable educational advancement environment, where ENs have opportunities to grow without limitations. Resonating with Freire's prevailing circumstances of his time, I draw motivation from his pedagogy of the oppressed, that a solution is possible amidst these intricate challenges for the ENs in this low resource environment context.

As a nurse educator, I believe that we need to rethink and innovate the best approaches to this EN advancement issue and to facilitate access to sustainable, affordable, and flexible programs. This study creates the contextual evidence to better understand the ENs experiences and brings together ENs and educators to support the construction of solutions, identify new ideas for a flexible EN advancement program, to influence nursing and government policy. Successful solutions must navigate and overcome key critical issues, such as workplace clinical workload, difficulties in accessing paid study leave, limited access to scholarships, inflexible education designs, which are the typical issues facing the nursing profession, especially in low resource environments (Klein-Collins, 2011b; Voluntary

Service Overseas, 2012b). Indeed, my hope is to find better ways of supporting nursing education, which will extend beyond this PhD study to post-doctoral projects.

1.15 Study aim and objectives

The study aim was to generate an evidence base to inform a new educational framework for Uganda to improve access to education for ENs seeking to advance their career. The objectives are fourfold:

1. Explore experiences, aspirations and needs of ENs in Uganda with respect to advancing their nursing education.
2. Identify the barriers and facilitators for educational advancement of ENs in Uganda.
3. Examine the suitability of Ugandan EN advancement programs in meeting EN education needs.
4. Using research findings generate a new educational framework on which Ugandan nursing institutions can build appropriate and accessible EN advancement programs.

1.16 Thesis structure

The thesis is formed into eight chapters which progressively present the development of the research study, the application of the research plan and the study findings, culminating with a critical discussion of the new knowledge. The focus of each chapter is described.

Chapter One: This chapter set the scene, introducing the thesis topic and the focus on EN advancement and the issues facing Nursing in Uganda, compared to the wider world. The urgent need to increase the level of nursing education to improve the quality of patient care and health outcomes. The converging issues in Uganda and many Sub-Saharan African countries were critiqued, and the lack of flexible EN-RN nursing programs, with current ones not meeting the needs of ENs needing to advance their careers. The motivation for the research, the study aim, and objectives are summarised.

Chapter Two: Examines the evidence of EN Advancement, seeking current literature of what is known regarding EN advancement and what gaps exist, particularly knowledge within low resource countries where the context is challenging. The experiences, aspirations,

needs, barriers, facilitators, and suitability of EN-RN programs are critically analysed. The chapter situates Uganda's EN-RN advancement education against evidence on best program designs in different countries.

Chapter Three: Draws together the theoretical framework for the study, examining theories and models for nurse education that could be useful in informing the EN-RN advancement. A background, critique and overview of the work of Cross (Cross, 1981) and the Chain of Response model offers a way to explore key concepts drawn from ENs experiences, aspirations, needs, barriers, facilitators, and suitability of EN-RN program.

Chapter Four: The research methodology is discussed, and a plan of research presented and justified, taking forward a mixed methods multiphase design. The chapter provides a rationale of the decisions made for sampling, data collection processes, key ethical considerations, and the selected analytical approach which guides the robust study design.

Chapter Five and Six: Introduce the study results, including the demographic findings from all the three sequential study phases. The results were integrated to facilitate the presentation of different data to support the deeper understanding of the issues influencing the EN-RN educational advancement. The two results chapters focus on two different lenses for describing the EN educational advancement issues. Chapter five generates a unique evidence base of Ugandan EN experiences and aspirations for career advancement, while chapter six draws on the findings to explain and develop the institutional educational and workplace issues.

Chapter Seven: The discussion provides new insights into the EN-RN advancement education, highlighting what should change. These are presented in three sections in which the chapter discusses how to overcome barriers to EN advancement; develop new EN-RN education programmes/framework for Uganda; and extend the COR model to the LIC context.

Chapter Eight: The final chapter presents the thesis conclusions and recommendations in a summarised way. These highlight key recommendations to ENs, educational institutions, and regulators. The chapter also provides recommendations for contextualizing the COR model to a LIC context, and highlights areas for further research.

1.17 Chapter summary

The issues affecting the advancement of ENs in Uganda have been reviewed and key barriers exposed surrounding the development of nursing advancement programs. One of the key challenges to EN educational advancement was the inflexible educational framework on which EN to RN education was constructed. Now is the time for higher educational institutions to take on the role to identify and develop appropriate solutions. The PhD study is developed to expose the issues faced by ENs, to move forward what has been a problem for some time to influence and stimulate education leaders to develop ideas and pathways to advancement programmes that are accessible. The next chapter examines the available literature in relation to EN educational advancement, bringing into perspective the need and context of low resource environments.

Chapter 2: Evidence Examining EN Advancement

2.1 Introduction

The key issues surrounding EN advancement in Uganda and many Sub-Saharan countries have been contextualized in this Chapter. The historical development of nursing, the professionalization and introduction of different cadre levels, has contributed to the improvement and access to different forms of health care in Uganda. Nursing education programmes have expanded, yet access to EN advancement in Uganda has been completely overlooked. This chapter critically examines the current literature on EN educational advancement to the RN and exposes gaps in knowledge that the thesis seeks to address. Synthesizing what research has been developed, what we already know about the experiences, aspirations and needs of ENs with respect to advancing their nursing careers, provides a platform from which to add new knowledge. It highlighted the barriers that ENs faced and the facilitators they sought in their quest for advancing to the RN. This was done in the context of a low-income countries (LIC). Further, the chapter discussed the EN advancement program in Uganda and the elements that were inhibitive or facilitative towards EN advancement, hence examining their suitability in meeting EN education needs. Programs and elements that were considered applicable from other environments were also considered. The literature was organised topically in four sections, and these were the experiences, aspirations and needs; the barriers and facilitators; EN advancement programs; and lastly a summary of the gaps in the literature.

2.2 Sources of evidence

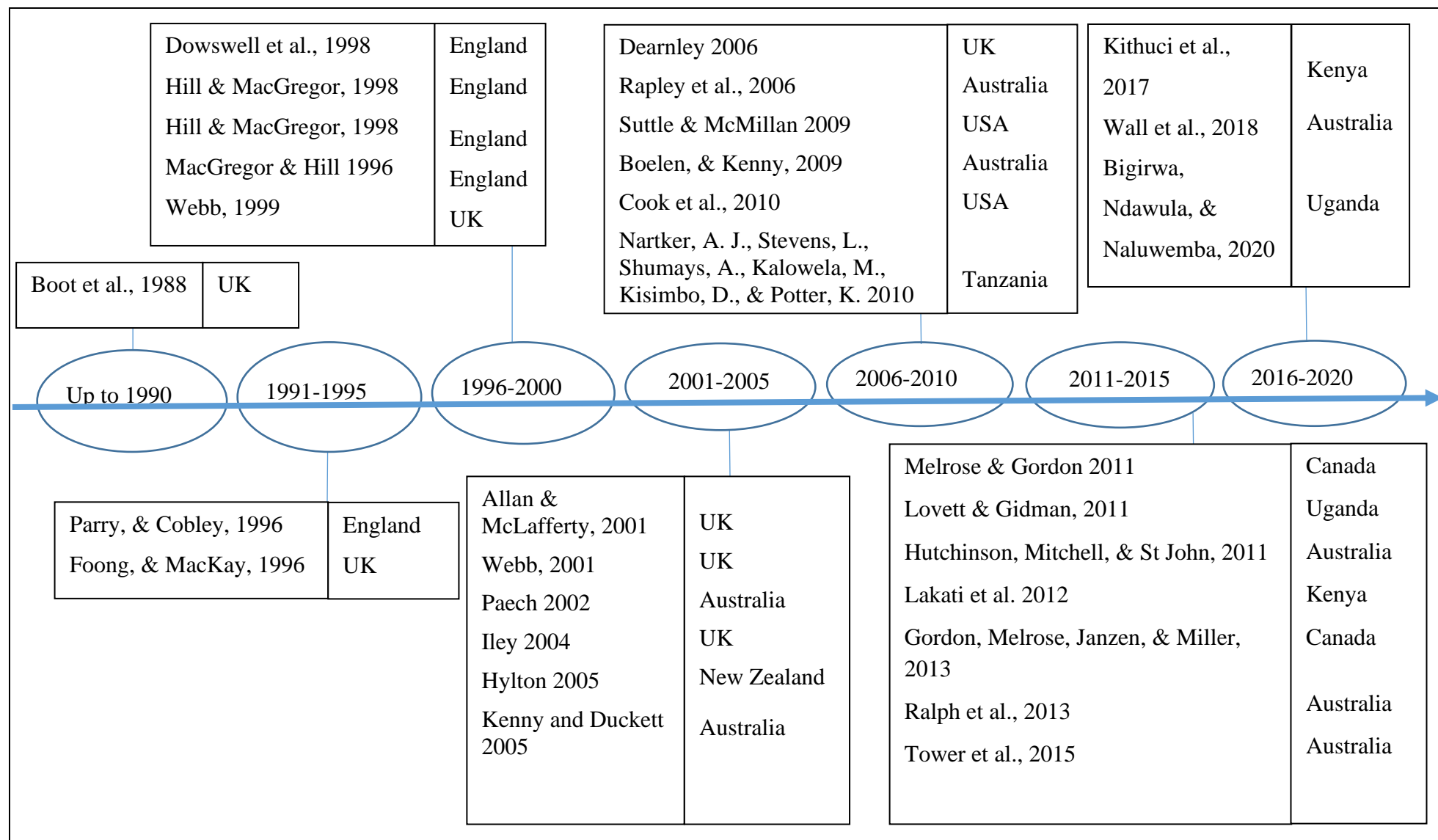
The sources available revealed that much of the literature on EN advancement was conducted in the HIC with very little known from the LIC such as Uganda. A tally of the relevant articles for review (shown in Table 14) revealed that 83% of research articles originated from countries such as UK/England, Australia, USA, Canada, and New Zealand with scant evidence from LIC.

Table 14: Tally of countries where the evidence originated

Country	Tally	Total	Total count and % of HIC vs LIC	
UK/England	//////////	12	25	83%
Australia	////////	8		
USA	//	2		
Canada	//	2		
New Zealand	/	1		
Kenya	//	2	5	17%
Uganda	//	2		
Tanzania	/	1		
Total		30	30	100%

When the evidence was reviewed on a timeline series, it emerged that most had been produced between 1996 and 2013, as shown in Figure 2. Current evidence to guide the discussion on EN-RN advancement was lacking. Context relevant evidence was not easy to find, consequently grey literature was sought, although utilised as a lead to published articles and to ground the thesis in chapter one. As will be seen in later sections, the evidence on nurses seeking educational advancement was widely available although mainly targeted RNs than ENs. The evidence on ENs seeking advancement to RN was scanty, and the evidence from LIC was even scantier. This finding could be attributed to the HIC’s nursing workforce statistics of RNs outnumbering ENs. Hence the evidence also tended to follow this trend, as the HIC also tended to be the key producers of this evidence, they produced evidence that resonated with their workforce proportions. While generalizations could be considered, a gap remained to generate EN informed evidence, and as will be seen in the chapters of results and discussions, there were concerns peculiar to ENs. Evidence showed that ENs aspired for advancement although they faced enormous challenges and their advancement-seeking experiences were frustrating, as outlined later in the chapter of results. While there was a host of barriers that ENs struggled with in seeking advancement to the RN, there were also facilitators seen as supportive to the cause. The findings from this literature review and later the results, were both utilised in informing a key outcome of this study which was the elements needed in building responsive EN-RN programs.

Figure 2: Timeline series of development of evidence on EN-RN advancement education



2.3 Search strategy

The current evidence on EN advancement education was searched using a comprehensive strategy (Aveyard, 2014; Bettany-Saltikov, 2012) to identify relevant literature. This included searching sources of peer reviewed journals; grey literature; books & book chapters; online databases; reports; regulation communiques, theses, and opinion papers, (see appendix 1 for the list of sources searched). Only peer reviewed articles were considered for inclusion for the focused critical review, but other sources informed the wider understanding within this thesis.

Databases were selected subject to their orientation to nursing; health; education; social sciences and humanities reflecting the EN educational advancement focus of the study. The search focused on sources that studied the concept of EN educational advancement, the EN experiences, aspirations, needs, barriers, and facilitators for advancement, in relation to the study objectives. Sources found were mainly from published articles; institutional reports and government reports that provided useful information, statistics, and direction on the educational advancement of ENs. Considering that the EN cadre was termed differently in other regions, additional search words for similar cadre/roles were included such as Licensed Practical Nurse (LPN), level 2 nurse, second level nurse, and second level registered nurse. In some cases, it was noted that there wasn't a direct fit for the EN cadre. For example, while the LPN may be seen as an equal to the EN, it was not necessarily so, as the training duration was significantly different. Therefore, in understanding all the EN variants, an average consideration was made, if the cadre was below the RN, or was the lowest licensed by the professional regulator and could advance to the RN role in one educational advancement transition in the respective country.

Studies that generally examined educational advancement for working nurses especially in low resource settings were specifically sought, as they brought contextually relevant learning. In relation to designs, studies with all spectra of methodologies and designs were included, allowing a wide search. The database search strategy, search terms and results are attached as appendix 2. The search strategy started by determining the information needs, identifying the variables and concepts against which to conduct the literature search. These were the EN experiences; aspirations; needs; barriers; facilitators; and suitable EN advancement programs. This was followed by identifying the keywords which included enrolled nurse; licensed practical nurse; second level nurse; experiences; aspirations; needs; academic advancement; educational advancement; conversion; extension; career

development; barriers; facilitators; and motivators. Keywords and related words were used to capture relevant papers. This was followed by identifying information source sites which included gateways, databases, all other electronic and non-electronic sources. Ideas were sought from librarians on the most likely and qualifying sites. Details of search results are provided in appendix 2 and the databases that were selected are listed in appendix 3.

The results were ordered by relevance. The search results were refined using search limiters and expanders such as Boolean operators, truncations, and wild cards, see complete list in appendix 2. The search strings that were utilized are shown in table 15.

Table 15: search strings that were utilized for literature search

1.	Concepts	String	Filters
2.	population	(enrolled nurs* OR licensed practical nurs* OR second level nurs*)	
3.	Population and advancement	(enrolled nurs* OR licensed practical nurs* OR second level nurs*) AND (academic advanc* OR education advanc* career develop* OR EN-RN conversion)	
4.	Population, advancement and experiences, aspirations & needs	(enrolled nurs* OR licensed practical nurs* OR second level nurs*) AND (academic advanc* OR education advanc* career development OR EN-RN conversion) AND (experience OR aspiration OR need*)	peer reviewed, fulltext, 1980-2022
5.	Population, advancement and barriers & facilitators	(enrolled nurs* OR licensed practical nurs* OR second level nurs*) AND (academic advanc* OR education advanc* career development OR EN-RN conversion) AND (barrier* OR facilitat* OR motivat* OR enabler*)	peer reviewed, fulltext, 1980-2022

The reference lists of selected papers were also perused to identify any relevant papers that may have not been found through the initial search results. Further searching was done through the related articles function.

2.3.1 Inclusion and exclusion criteria

Studies were included if they were written in English; published as peer reviewed articles; the study population was ENs or their equivalents i.e., licensed practical nurse, second level nurse; the content involved ENs aspirations or experiences or needs or barriers or facilitators for education advancement, and EN-RN advancement programs. Studies that had mixed samples including ENs or their equivalents were also included. Further, articles

were selected if they were published from 1980 to 2020, and later updated to 2022, but no new articles were found. The starting period of 1980 was considered because this was the period when studies targeting ENs seeking educational advancement started emerging (Aslanian, 1983; Boot, Hurst, McGeorge, & Smith, 1988; Cross, 1981; Kerka, 1986; Levinson, 1986; Scanlan & Darkenwald, 1984; Shipp & McKenzie, 1981). The search results were initially assessed by studying their titles and abstracts hence allowing the removal of the irrelevant articles. Papers that met the inclusion criteria as set in table 16 were critically reviewed and summarized in appendix 4.

Table 16: Inclusion and Exclusion criteria for literature

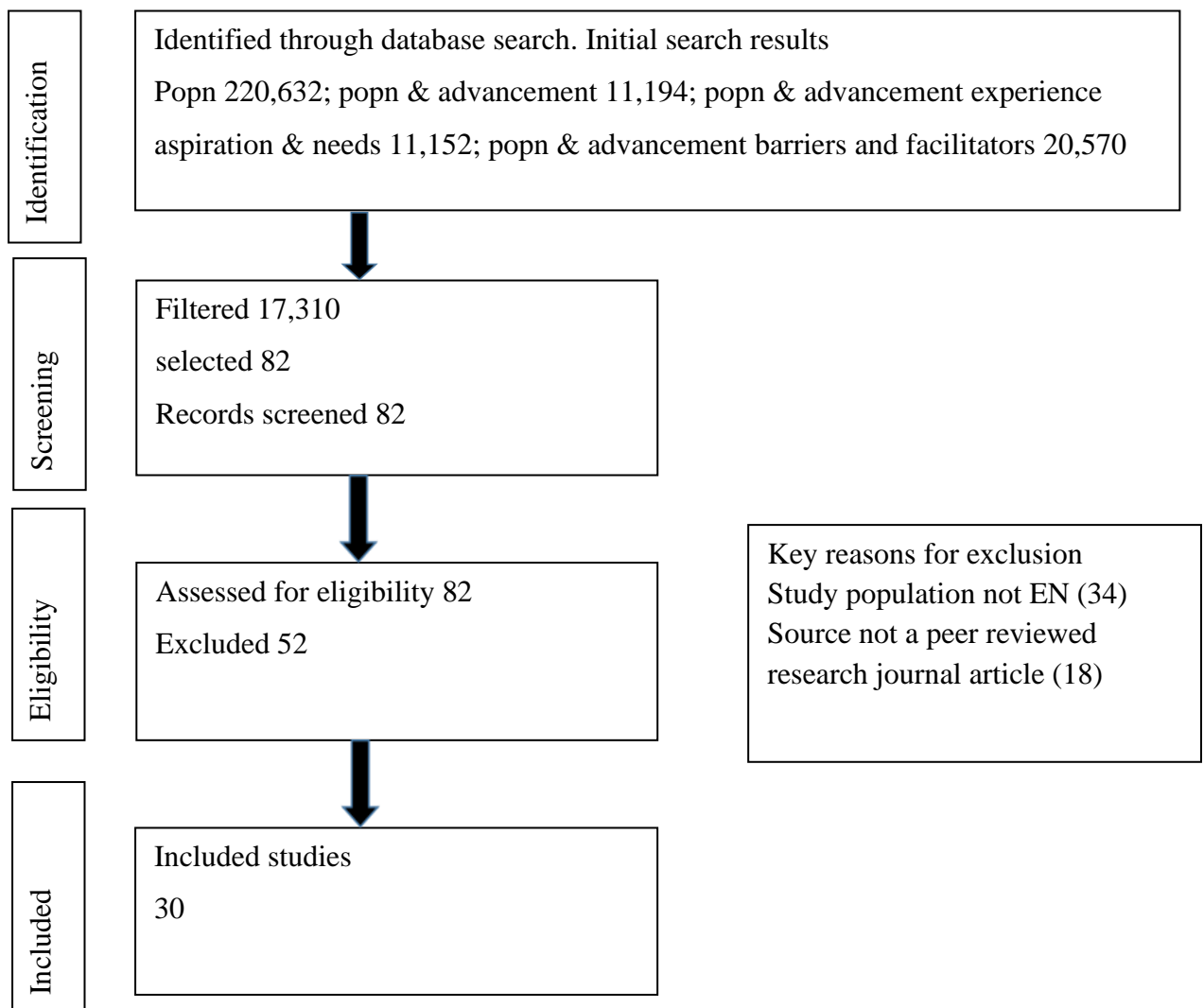
Parameter	Inclusion criteria	Exclusion criteria
Population	Enrolled nurse or their equivalents i.e. licensed practical nurse, second level nurse.	Nursing aides ENs or their equivalents not specified in the population or as part of population.
Subject	Aspirations, experiences, needs for Education advancement. Barriers, limiting factors, challenges, facilitators, enablers, motivators.	
Dates	1980-2022	
Language	English	
Publication status	Peer reviewed article.	Reflections, Editorials, letters, government and institutional reports, theses.

A PRISMA flow diagram is provided as Figure 3. Because of the peculiar nature of ENs and nursing work, there was insistence to have literature that focused on them. It was noted for example, that their work spanned over the 24 hours of the day which was sectioned into three phases of day, evening, and night shifts; their placement at the lowest level of the licensed nursing and healthcare workforce professions; and being a female dominated profession required evidence that was focused on them. Due to their special circumstances as outlined above, there was evidence that could and could not work for them. The nature of solutions they needed for supporting their educational advancement had to be focused on them. The evidence that was not focused to them, but which could be inferred to them was used in other sections such as the introductory chapter and the discussion chapter. The review was structured using a concept-centric approach (Cooper, 1988; Randolph, 2009; Webster & Watson, 2002) with the concepts reflecting the objectives of this study: such as EN

experiences, aspirations, needs, barriers, facilitators to advancement, and the types of EN programs. Selected studies were summarized reflecting information regarding authors; article title; study type/ article type; theoretical framework; questions/ hypothesis/variables; methodology; sample/size; analysis/statistics; and vital conclusions made.

Excluded studies were those that did not focus on ENs or who had mixed populations without clarifying the involvement of ENs. Reflections, Editorials, letters, government or institutional reports, and theses were also excluded. It was reflectively painful to exclude some theses as they never made it to peer reviewed articles, the work of Adelman (2002) was noteworthy. Her study was focused on EN-RN advancement and utilised the right population of non-advanced LPNs but considering advancement. Even though it was two decades old and was conducted in a HIC, it made key contributions to what should be appreciated as facilitators and barriers to the EN-RN advancement even among LICs.

Figure 3: PRISMA flow diagram for the literature review process



2.4 Overview of studies

A total of 30 articles were selected having met the inclusion criteria set in Table 14. The articles selected spanned an era of three decades with the oldest article having been published in 1988 and the most recent being 2020. As shown in table 17 the study designs were mainly descriptive cross-sectional surveys, qualitative interviews and Focus Group (FG) discussions (n=17) (Allan & McLafferty, 2001; Boelen & Kenny, 2009; Boot et al., 1988; Cook, Dover, Dickson, & Engh, 2010; Dowswell, Hewison, & Millar, 1998; Foong & MacKay, 1996; Gordon, Melrose, Janzen, & Miller, 2013; Hill & MacGregor, 1998a; Hutchinson, Mitchell, & John, 2011; Hylton, 2005; Kenny & Duckett, 2005; Kithuci et al., 2017; Lakati et al., 2012; Melrose & Gordon, 2011; Parry & Cobley, 1996; Rapley et al., 2006; Webb, 2001). Although qualitative studies accounted for the highest percentage of designs in the selected articles (43%), and often contributed rich meaning/understanding to the EN-RN advancement concept, they were often with low samples consequently limiting their use. Even the survey studies, although they were 26% of selected studies, they also had low samples (Allan & McLafferty, 2001; Boelen & Kenny, 2009; Boot et al., 1988; Cook et al., 2010; Hill & MacGregor, 1998a, 1998b; Kithuci et al., 2017; Parry & Cobley, 1996). Consequently, there was need to consider larger sample sizes for ease of generalizability. The utilisation of mixed methods (n=4) was low, used in only four studies (Bigirwa, Ndawula, & Naluwemba, 2020b; Hill & MacGregor, 1998b; MacGregor & Hill, 1996; Nartker et al., 2010).

Table 17: Study designs of selected articles

Approach	Study designs		Total
Quantitative	Survey	8	8
Qualitative	FGD	5	13
	Interviews	4	
	Phenomenology	2	
	Case study	2	
Mixed methods	explanatory sequential study	4	4
Review	Narrative	2	5
	Meta-synthesis and Integrative review	2	
	Other	1	
Total			30

From the four mixed methods studies, Nartker et al. (2010) focused on programmes review with the intention to increase health worker capacity through distance learning in Tanzania. The population was a large mix of nurses and non-nurses (n=125); students and non-students; nursing programs and non-nursing programs n=25. While the article was rich, having involved various study populations such as programme managers, tutors, students, IT specialists, preceptors, decision makers, health care workers, HIV & AIDS care and treatment partners; the analysis did not pick particular professional attributes which could have been leveraged to further inform nurse-specific program designs. The particular nature of nurses' work-structure could have benefited Nartker et al's. study to allow potentially more program design proposals. This could not have been explored with such a huge professionals mix. Even then, the non-homogenous population was quite wide denying the study to go deeper. Nevertheless, the study was rich in informing context realities and a wide sector outlook, however follow-up studies could have yielded profession specific realities and recommendations. Since Nartker et al's approach was a wide scope, it was useful to inform program designs, however it failed to capture niche attributes such as EN experiences and aspirations. The second study to utilise the mixed methods was that of Hill and MacGregor (1998b). Although it provided rich findings from two data sets (EN survey n=130; interviews n=8), there wasn't a clear integration plan and rationale for the two mixed methods utilised. Given the age of the Hill and MacGregor (1998b) study, it was commendable that even at that early time, they sought to understand the EN-RN advancement concept from a mixed methods approach. This current study utilised the mixed methods multiphase sequential design, no study had utilised this design before, nor sequentially organised mixed methods, as all studies were concurrent (Bigirwa et al., 2020b; Hill & MacGregor, 1998b; MacGregor & Hill, 1996; Nartker et al., 2010).

Most studies (83%) were conducted and published in HICs with only a handful (17%) originating from LIC. Further, the international evidence is not current, and this could be attributed to most countries having phased out ENs so new research is warranted in LIC where these ENs still exist as an important nursing cadre. Therefore, utilization of old data from HICs to inform changes in education processes and programs in a LIC would not be appropriate.

The subject matter focused on answering a career advancement need for ENs in the different locations. The older studies tended to be more astute in describing the EN educational advancement situation illuminating the experiences, challenges and need (Dowswell et al., 1998; MacGregor & Hill, 1996). The more recent studies focused on

progress in the program and were often not EN specific as their population was mixed (Bigirwa et al., 2020b; Hutchinson et al., 2011). It was clear from these studies that scheduling that was aligned to the availability of nurses was a key consideration in meeting educational advancement need for ENs. Nevertheless, it was still prevalent in the findings that even with these conveniently scheduled programs, ENs still struggled to balance schooling expectations with work and family commitments.

Differing from several studies which focused on the ENs who were already enrolled in advancement programs or had completed them, this study focused on ENs who had failed to advance to the RN level. These were selectively included because they discussed concepts that related to the EN who hadn't converted or generally programs that targeted non converted ENs. There were only two studies that had limited their study populations to ENs who had not advanced to the RN or were not in advancement programs (Foong & MacKay, 1996; Lakati et al., 2012). There were a handful of studies that were also close to this but had a mixed population of ENs who hadn't advanced and those who had or were in the process (Webb, 2001). Although Webb's 2001 study had a mixed population of those ENs who were in advancement to RN and those who were not, the focus of the article was on understanding why ENs chose not to advance to the RN, highlighting key findings. Although the study suffered from a very poor response rate of 13 out of 43 (30%), potentially limited by the FG design, the findings uncovered key challenges that ENs had to surmount. It was not clear why Webb needed to involve those ENs who were currently advancing to the RN, as this took away the homogeneity of the population.

Some studies examined advancement beyond the RN to the BSN (Hutchinson et al., 2011; Hylton, 2005; Melrose & Gordon, 2011; Paech, 2002; Ralph, Birks, Chapman, Muldoon, & McPherson, 2013; Rapley et al., 2006; Tower, Cooke, Watson, Buys, & Wilson, 2015). While this was beyond the scope of RN, it was considered professional advancement from the EN, hence they were also included. In keeping with the study objectives, the studies were analysed into three broad key categorizations of experiences, aspirations, and needs; barriers and facilitators; and EN advancement programs. Each theme is critically reviewed in turn.

2.5 Experiences

The EN conversion experience has been well-documented, however little is known about the pre-conversion experience of ENs who have not yet started their conversion

(educational advancement) journey, i.e., those who have not yet advanced. As well, their aspirations and needs are not well articulated in the literature. Much of it is assumed or implied from studying the conversion experience of populations of ENs who are already in school or completed their educational advancement to the RN. It is clear that the experience, aspiration, and needs of those ENs who have not yet advanced might be different, contributing to the very reason why they fail to advance. The very reasons that held them back from advancing, make them different from those who are advancing or already advanced to RN. This therefore produces a different experience for them which needs to be specifically articulated and supported through well-targeted initiatives. The few studies that have looked at the pre-conversion experience report that it is full of concerns about ongoing job security, job satisfaction and lack of professional opportunities, and fears of academic ability (Boot et al., 1988; Iley, 2004; Lakati et al., 2012). All these studies originate from HICs where advancement is supported, without such support and access to advancement, ENs in LIC may well have increased fears. Without growing beyond the EN role, opportunities for career growth and improved income remain minimal, often tied only to the RN conversion (Ralph et al. (2013). This left many ENs living unhappy and bitter lives (Boot et al., 1988; Gordon et al., 2013). While many ENs aspire and desire to advance to the RN level, various reasons hold them back, with the challenging experience being a major contributor (Boot et al., 1988).

ENs face enormous challenging experiences in their quest for educational advancement to the RN level (Hylton, 2005; Tower et al., 2015; Wall, Fetherston, & Browne, 2018). The EN conversion experience has been studied in the developed world and results have exposed the delicate struggle to balance education, employment, and home/family responsibilities (Ralph et al., 2013; Suttle & McMillan, 2009; Tower et al., 2015; Wall et al., 2018). Depending on the resource level in the ENs environment, there was a variation in support and buffer structures, influencing an individuals' experience and determining, if and when an EN would advance or not. Literature about nurses in general as non-traditional students seeking education advancement was widely available, however, it targeted RNs more than ENs (Boeren, Nicaise, & Baert, 2010; Choy, 2002; Englund, 2019; Keith, 2007; Sheth, 2001; Wild, 2014). Scholarly work involving ENs as non-traditional students caught the attention of educationists and researchers around the 1960's and 1970's, although literature became prevalent around the late 1980's and 1990's, (Boot et al., 1988; Dowswell et al., 1998; Miller, 1967; Winters, 1968).

In studying the ENs experiences, evidence has tended to classify the ENs as non-traditional students hence making a much needed distinction between ENs and pre-service students (Melrose & Gordon, 2011). This was key as it influenced what would be seen as facilitating and barring their educational advancement; and consequently, influence how their educational advancement programs should be designed. The understanding of non-traditional students in nursing has been varied but often categorised as nurses seeking educational advancement and, adults qualified in other professions seeking entry into nursing programs (Englund, 2019; Seidl & Sauter, 1990). While these and other variant forms of defining non-traditional students exist, this study centred on the former; nurses seeking educational advancement, and particularly the ENs.

2.5.1 Stressful and unpleasant experiences

Experiences of ENs seeking educational advancement have been reported to be challenging and stressful (Dearnley, 2006; Melrose & Gordon, 2011; Ralph et al., 2013; Wall et al., 2018; Webb, 1999). An unfavourable experience has far reaching impacts, for example in the studies of Boelen and Kenny (2009) and Dearnley (2006) who studied how to support enrolled nurse conversion, they reported that these non-traditional student cohorts did not see themselves as measuring up to the program they had enrolled due to the past unpleasant experiences. Results from various studies indicated that the experience of non-traditional students seeking educational advancement was a challenge (Cook et al., 2010; Hylton, 2005; Kenny & Duckett, 2005; Wall, 2016). These scholars reported that the prospective adult nurses juggled many responsibilities before they could enrol for study programs and many times failed, feeling left behind and consequently generating undesirable experiences. Nevertheless, they often would not just sit back, they had to struggle and advance constantly trying to overcome challenging circumstances. The educational advancement experience was threatening and pushed ENs out of their comfort zones, making them feel vulnerable (Hylton, 2005). Consequently, making decisions of educational advancement was stressful as it sometimes resulted in losing employment, or reduced time spent with family members (Dowswell et al., 1998). Indeed, decisions for ENs returning to school had a multifaceted impact on the student and their family (Cook et al., 2010; Lakati et al., 2012). It involved significant personal, social, and professional commitments and led to social, economic, and family difficulties, even before the beginning of the educational advancement journey. Many ENs felt that decision-making around this time was complex and a source of stress, making the experience unpleasant (Rapley et al., 2006). Challenges were real, linked to different

facets of their lives at individual, family, work, and educational institution levels, leading to stressful experiences. Stress related to the expected rigors for the school programme, should they enrol; associated with frustration, anger and helplessness surrounding mandatory advancement or the threat that their role was being phased out (Foong & MacKay, 1996). Looking the evidence available, it shows that the majority of studies took place within a context of a mandatory expectation for advancement, which was not yet the case in Uganda, as the decision to phase was suspended (Dowswell et al., 1998; Foong & MacKay, 1996; Hill & MacGregor, 1998a). Research that draws out ENs experiences in non-mandatory contexts may expose different experiences driven by aspirations. Although the EN educational advancement journey was characterized by stressful experiences, they were eventually outweighed by the satisfaction of successful conversion leading to improved self-confidence and esteem (Cook et al., 2010; Hill & MacGregor, 1998a; Paech, 2002). Not finding a solution to the advancement need and aspiration can be stressful and make their experience even frustrating as a key goal remains unmet.

2.5.2 EN role, phasing out and limited scope of practice

This unpleasantness of the advancement-seeking experience is not surprising given the significance of what was at stake for these adults, many of whom could be sole family breadwinners and even single parents. While there may be no overt mandatory requirements to seek advancement currently in Uganda, there is still a covert threat that the decision to phase out ENs will be implemented in the future. Evidence exposed challenges related to remaining within the scope of practice set by their initial EN education and clinical experience, which threatened their very nursing existence forcing them to consider advancement, even though it was perceived risky and they preferred to stay where it was comfortable (Hylton, 2005).

It has been noted that ENs returned to school for various aspirations such as career change, realizing a lifetime goal, improved economic ability, and a job requirement; if these were not met, they remained frustrated (Cook et al., 2010).

Other sources of challenges came from the many ENs who had advanced to RN, but still did the same work even though for a different pay, (Chang & Twinn, 1995). In some cases, there were those who had even delayed getting a pay change. These delayed promotions and no change in work profile could also influence the ENs who had not yet advanced, hence disillusioning them that the ENs who advanced are like them, which was not the case and was only temporary with possibility of changing sooner or later. Although it

involved similar regular tasks between those ENs who had advanced and those who hadn't, there were additional benefits that ENs who had converted enjoyed, while those who didn't advance missed (Iley, 2004; Kithuci et al., 2017). Key to these were the increased payment, better incentives, and a sense of fulfilment, whenever they occurred. Even for those who delay getting the promotion, it was only a matter of time and things would change. Therefore, the consolation of doing the same work between those who advanced and those who didn't, was dishonest. Of course, there were also those ENs who argued that the work done by RNs (those who had advanced from EN) was not any different from theirs, however, this was easily sorted by the clarity from the scope of practice, and it was only a matter of time before the RNs could be assigned new roles, different from the ENs, and they would shine while the difference became evidently undeniable (Chang & Twinn, 1995; Hill & MacGregor, 1998b).

Chang and Twinn (1995), while studying role determination in nursing and looking at the implications for service provision, reported that the majority of ENs felt the work they did was similar to that of the RNs who had advanced from EN. In their study, the reported similarity in roles was quite high with ENs indicating that they carried out 83.6% of the same activities as RNs. Without a clear scope of practice in such an environment, the roles ascribed to each cadre may not reflect their level of educational preparation and this could undermine the benefits of educational advancement. For countries that have a clear scope of practice for the two levels, this is easily sorted out. Nevertheless, the job posting was still an issue because the transition to RN role was not immediate as it had to wait for the employers' action or change of job posting. As well, some ENs could see the RN doing some similar tasks, but this could be a duty allocation and did not mean that the RN couldn't do more. What some of the ENs may not realize (those who think the work is the same) is that once the RNs leave the job posting and get another job, even within the same institution, the work they do will change. So, seeing an RN doing similar work of ENs does not necessarily mean that they are at the same level. As well, even if the work may be the same physically, there was still a difference as the RN could take extra precautions, work smarter, faster and at a higher level of accountability (Chang & Twinn, 1995; Paech, 2002).

2.5.3 Negative labels

ENs in conversion programs often experienced uncomfortable labels, as struggling students and were identified as having issues that exacerbated challenging experiences, such as individualized learning needs, difficulty adapting to the learning environment, low confidence and low self-esteem (Dearnley, 2006; Wall, 2016). This negative labelling

worsened their experience and was wrongly attributed to all ENs. While it was true that there were those ENs that struggled, it should not be projected that everyone did.

This negative labelling and connoting was associated with students not seeing themselves as measuring up to the program they had enrolled for because they lacked confidence in their ability to undertake the student role (Boelen & Kenny, 2009; Dearnley, 2006). This was so hard on them that at times, students were hiding the fact they had some nursing experience, (Hutchinson et al., 2011). This was also detrimental to their esteem. Further, adjusting to the student role was reported to be difficult for students with a nursing background, often needing more time and counselling to complete things (Dowswell et al., 1998; Tower et al., 2015). These made their experience challenging and it was plausible that it would have similar ramifications for those waiting to enrol. Therefore, support structures for these non-traditional students ought to be well planned and executed so as to improve their advancement experience and further reduce the negative ripple effect to those who have not yet enrolled, after-all any unfavourable experiences along the way would influence uptake. However, a concern was also the move in the EN-BSN, as seen in (Boelen & Kenny, 2009) being two steps while the one of EN-RN was only one step. Consequently, this could explain the heightened lack of confidence in their study. Further, the type of study environment and who they studied with was key to their experiences. For example, in the EN-BSN program, students were in a university environment that was totally new; they studied with pre-service students who came from a different type of background; and the level was two steps ahead of the EN (Boelen & Kenny, 2009; Ralph et al., 2013). As for the EN-RN program, these students studied in an environment that was similar to what they had been to in their pre-service program; they studied with students that were close to them in terms of their own exit from secondary education; and the level was only one step ahead of the EN, hence their lack of confidence was not as heightened. Therefore Boelen and Kenny (2009) recommendations of improving confidence through a bridging program may have limited application for EN-RN programs.

It should be acknowledged that ENs were adult learners with different support needs from those of traditional nursing students (Cook et al., 2010; Dowswell et al., 1998; Melrose & Gordon, 2011; Tower et al., 2015). This uniqueness of ENs as non-traditional students was key in informing relevant support structures. However, this caused them to be misunderstood and viewed with a label of slow learners rather than a different type of learner (Tower et al., 2015). Learning from the work of Dearnley (2006) on finding the professional voice, the 'hesitant practitioner' can be viewed as synonymous with the 'hesitant student' due to the

negative labelling. While Dearnley castigates traditional education methods as being responsible for the position these ENs find themselves *visa vis* the labelling, she proposes that a solution is possible. Education support structures should be perceived as well-meaning, and an allowance made for the learner to become an abled contributor to their own advancement. These negative labels towards ENs have a potential ripple effect on those who have not yet considered advancement and could exacerbate their fear of advancing. However, it seemed that there was no comfortable choice for the EN, advancing or remaining at the EN cadre was equally as challenging and frustrating (Foong & MacKay, 1996; Hill & MacGregor, 1998b).

2.5.4 Personal and family engagements

The challenges involved struggles with becoming learners, managing conflicting demands of outside life, developing a student identity, and experiencing threat to their sense of professional identity (Boot et al., 1988; Gordon et al., 2013; Hylton, 2005). As well, there were negative emotions associated with returning to school and a general sense of bleakness due to a low overall support system, hence making the experience challenging and unfavourable (Cook et al., 2010; Dearnley, 2006). Even though the conversion process offered a difficult challenge, the tough conversion experience encouraged some ENs to work harder on their advancement aspirations, while it discouraged others. This variant response may be due to the differences in ENs circumstances reflected in the variations in the personal, dispositional, and institutional domains. Their capacity to handle challenges related to advancement aspirations may be different depending on the support structures in their personal and family networks.

Since adults with lower formal education are also weaker in their support structures and connections to foster educational advancement, their experiences are usually unfulfilling hence needing strong facilitative opportunities (Ralph et al., 2013; Rapley et al., 2006). Consequently, engaging in educational advancement to the RN gets a low rank in terms of the priority needs in these people's lives. Even with similar circumstances, ENs could respond in various ways to the educational advancement call, depending on what they saw as priorities and possible opportunities. So even in the same context, the realities elicit varied responses hence enabling some ENs to enrol and discouraging others. The realities of educational advancement can be greater than the direct cost and could include unexpected issues such as indirect costs of books, supplies, foregone income, time spent studying, loss of social activities, and effort applied to plan and pursue the advancement (Dowswell et al., 1998;

Webb, 2001). These are valid issues for ENs to contend with, before deciding to re-enter school. The answers on how to navigate these costs and opportunity costs is not an easy one, for ENs who are practicing in a LIC in the lowest earning bracket with minimal support.

2.5.5 Aspirations

It has been noted that ENs returned to school for various aspirations such as career change, realizing a lifetime goal, improved economic ability, and a job requirement; if these were not met, they remained frustrated once met, ENs reported feeling satisfied (Cook et al., 2010). Clearly, EN aspirations for advancement are attributes that would improve care outcomes and the caring experience (Iley, 2004; Suttle & McMillan, 2009). It can be argued that EN advancement might be associated with bettering the caring experience on both sides of the advanced EN (now RN) and the patient. Therefore, the ENs advancement experience needs to be supported to enable them to make the right decisions, as the outcome was widely beneficial.

2.6 Barriers

2.6.1 Difficulty balancing school, work, and family commitments

Although many ENs aspired to advance to the RN, some barriers made the dream to convert difficult. These included inappropriate education program designs, inflexible work schedules, and the rigors of a challenging course (Boot et al., 1988; Kenny & Duckett, 2005). The study of Boot et al. (1988) reported some astute findings regarding views of British ENs towards conversion courses and exposed some barriers. Their sample was ENs who had not yet enrolled in educational advancement programs and their results provided a firm basis for consideration of barriers for this population. Even though their response rate was low, at only 40% and the study quite old (over three decades ago), it raised some good starting points and from the right participants on the educational advancement continuum, as for this study. Boot et al. (1988) reported that the choice method to undertake the EN-RN advancement was through fulltime and part-time courses by 56% of the ENs (Boot et al. (1988). Considering that the population of ENs is a working population with family and social responsibilities, scheduling was key as it is where the barriers emanated. They would be choosing between full-time and part-time arrangements. Therefore, the work of Boot et al. was non-committal as the two (full-time and part-time) are important variables that should have been reported separately but were not. Preference tended to be more on the parttime scheduling, hence its

unavailability was seen as a barrier. Separating those who preferred the full-time EN-RN study design versus those who wanted part time should have been key evidence to inform program design presences. Consequently, it was a gap that was necessary to pursue. Although the context and rationale for aspiring to pursue EN-RN advancement were different, Boot et al. (1988) paper was a classic given that their population for the study was non converted ENs and some of the study aims resonated with this study. Although their population was non converted ENs, there remained differences in aspiration-rationale, and context. The ENs in, Boot et al. (1988) were being forced to advance which was different for the Ugandan context where mandatory advancement was not in consideration, although had been attempted and failed. Further, since their population was that of a 'specialised' group i.e., mental health ENs, it is not clear if there could have been additional barriers that influenced their choices for the EN-RN advancement. Other interesting findings that related to barriers were conflicting family responsibilities; lack of ward-based programs; doubts of academic ability; course curricula that had not been revised; and programs not utilizing continuous assessment. Even though the study was more than three decades old and the environment different the recommendations from Boot et al. could provide useful lessons to Uganda's EN situation. Nevertheless, an affirmation of participants from a low resource-environment is needed.

Using a qualitative study Webb (2001), sought to understand why enrolled nurses chose not to advance to RN and the barriers were family commitments; too much commitment in the family and work spheres; and lack of organisational encouragement. Considering that nursing was majorly female, some of the family situational barriers may be gender attributed, because of gender roles in the home. Although this was not to mean that males did not have family commitments that served as impediments to their educational advancement. However, from the samples utilized in the literature it showed that women were most affected and some of the activities that held them were paying bills and providing childcare (Dearnley, 2006).

Role transition from full-time practitioner to full-time student was also challenging and scared some ENs (Webb 2001). This needed to be managed especially in alignment to the type of program one has enrolled. In managing this transition Wall et al. (2018) recommends that ENs recognize their motivations and personal goals, however, this does not detail action oriented engagements of how it would happen. However, it's been argued that if the advancement was in response to a phasing out, then it may negatively influence the role transition (Boot et al., 1988; Dowswell et al., 1998; Wall et al., 2018; Webb, 2001). Hence

Wall et al. (2018) supports that the role transition be motivated by positive aspirations so as to promote success.

2.6.2 Financial

Financial hardships and the impact of the course on already existing commitments such as family and work was reported to be a real daunting challenge to deal with (Kenny and Duckett (2005). Consequently, one of the barriers that ranked high in literature was the issue finances (Boot et al., 1988; Dowswell et al., 1998; Hylton, 2005). Kenny and Duckett (2005) utilised a population of ENs that were already in transition to RN and these were already in the heat of the program. Although the majority of their sample was from rural areas with generalisation being limited, they raised financial limitations as key barriers that ENs needed to think through as they considered the advancement decision.

Finances as barriers have also been reported to stop ENs from even attempting to enrol or get admissions (Webb, 2001). With struggling finances and self/family to look after, the dream of educational advancement was not affordable. Financial barriers or poverty issues are certainly one of the major hindrances for the educational advancement of ENs as non-traditional students, and the impact of this may even be more felt in low socio-economic environments (Cook et al., 2010; Kithuci et al., 2017; Lakati et al., 2012; Melrose & Gordon, 2011; Wall et al., 2018; Webb, 1999). Evidence suggests that financial support to nurses advancing education was very crucial, without which educational advancement for nurses becomes very difficult (Kenny & Duckett, 2005).

It can also be argued that ENs whose earning is the least in the nursing cadres feel the greatest inhibition from this financial situational barrier. Research conducted with this financial barrier has consistently indicated that finances are a key barrier among non-traditional EN students (Kenny & Duckett, 2005). Certainly, considering that Uganda is a LIC, with EN salaries among the least in the world, it's certain that the financial barrier was highly felt.

As these ENs start families or support dependents, the barrier even holds more, hence reducing their financial capacity to afford educational advancement. Maintaining the upkeep of the family and home, especially among married adults, needs significant financial resources. It can be argued that this financial burden of returning to school could reduce the resources needed to run the family and maintain the home. The educational advancement of married non-traditional EN prospective students tends to be put off on these grounds. Single female ENs have fewer family constraints and hence the likelihood to advance, than married

and parenting female ENs (Cook et al., 2010). All these complicate the female EN chances of advancing. Consequently, for nursing, which is female dominated, the female-factor-impact on advancement could be more and needs to be supported. Consequently, these non-traditional students must work harder to meet domestic demands and plan for school, if at all school remain in focus. As Melrose and Gordon (2008) asserted, adult students, especially nurses seeking educational advancement, experience financial disadvantage as a result of competing priorities for their limited resources. And this could be more felt in nursing which is a predominantly feminine profession and lowly remunerated in LIC.

With current dynamic family structures where some females are single parents or even the family breadwinner, it would be interesting to understand how findings compare with the present and especially in a low resource environment such as Uganda where resources play a significant contribution to decision making and could easily be a barrier to EN advancement. There is no evidence on what it's like being a female EN and challenges of being single while supporting a family. There may be differences in cultural expectations in Uganda compared to current evidence from the developed world. It is important that this research explores this to gather relevant evidence and inform changes for ENs in this context.

The financial barrier was seen in tuition and non-tuition costs. For example, even though the ENs in the Dowswell et al. (1998) study did not pay tuition fees, they still complained about the high education cost which was related to indirect expenditures due to being in school. Even in the HIC where it was expected that the level of income was better than that of LIC, the ENs still found it a serious barrier to meet advancement costs (Dowswell et al., 1998; Webb, 2001). Given the difference in time (the era when these studies were undertaken) and the transformation in a country's economy, it might be useful to note any similarities and differences to the major barriers of EN advancement noted for HIC. However, understanding these barriers from a LIC context was needed. These financial challenges easily resulted in the inability to meet tuition costs, support to self and family consequently barring ENs from advancing to the RN (Kenny & Duckett, 2005).

2.6.3 Insufficient scholarships

While the conversion was possible for some ENs, it was not easily possible for others, due to challenges in accessing scholarships to fund school fees and access to full paid study leave. These have been known to be key factors that influence the advancement experience, yet they remained in short supply within the developing world (Lakati et al., 2012). Realities

such as these complicated the advancement-seeking experience and crushed ENs aspirations for advancement.

2.6.4 Indirect costs

The realities of educational advancement can be greater than the school tuition fees and could include unexpected issues such as cost of books, supplies, transport to school, upkeep etc, which when unmet can frustrate advancement efforts for ENs. These are all to be met by the EN and become valid costs for ENs to contend with. Dowswell et al. (1998) reported that involvement in conversion (advancement) often required more resources than initially thought, causing ENs to try to manage their education into time and resources that were just not available. However, Nartker et al. (2010) found that these can be reduced when distance learning style is utilised. For ENs who are practicing in a LIC in the lowest earning bracket, these indirect costs could be prohibitive.

2.6.5 Lack of support

Some ENs felt that the system and their seniors were unsupportive and had let them down, (Boot et al., 1988). However, this was not universal as it depended on the practice environment and how supervisors of ENs had been prepared to support their advancement. Even a basic support such as encouragement or showing of concern about their advancement needs was welcome. Webb (2001) reported that lack of encouragement from the workplace was a barrier. Further, some ENs were sad and worried because they felt that the EN cadre was a dying breed, and they did not want to be left behind (Hill & MacGregor, 1998b). This could worsen their already stressful advancement-seeking experience as they felt an urgency to act in an environment of limited support. Some ENs strongly expressed a sense of abandonment, and this was quite stressful for them. It should be noted that there are some ENs who may not be ready to advance as a result of age-related concerns and changes in priority, among others (Boot et al., 1988). If these undesirable experiences are not addressed and left unmitigated for long, some ENs may come near to retirement and their priorities could shift when they no longer see educational advancement as a goal/target, (Boot et al., 1988), but a missed opportunity.

2.6.6 Dispositional barriers

Dispositional barriers are those attitudes, perceptions, and expectations that prevent people from undertaking educational advancement. They are usually person-specific

characteristics and include things such as fear of failure, attitude toward intellectual activity, as well as perceptions about the ability to succeed (Allan & McLafferty, 2001; Webb, 2001). Further, the list of dispositional barriers may include things such as expectations, self-esteem, level of family support, and prior educational experience which can deter participation (Hylton, 2005). While in the situational and institutional barriers, adult learners could seek support from outward sources such as family and friends or help from educational institutions, this was not possible for dispositional barriers. This makes dispositional barriers quite peculiar. Therefore, solutions for dispositional barriers must come from within and be resolved by the individual alone. This can be done through various ways including ultimate determination and self-reliance. However, all is not lost as one can gain motivation from knowing that adult education could be a pathway to providing better-paying jobs; better opportunities to negotiate working conditions and a more enjoyable life, they then have to persist and find the drive to do it (Dowswell et al., 1998; Kithuci et al., 2017). The current conditions for RNs are better than those of ENs and of course, this could be a motivation for them to work towards and energize themselves to overcome the dispositional barriers. However, even beyond passive motivation circumstances such as the hope of better pay, it may be more beneficial if active motivators or facilitators were constructed to enable these non-advancing ENs to fight their internal dispositional barriers and make the right steps towards advancement.

Returning to school as an adult learner can be an intimidating idea, however, if one starts their career journey at the bottom end of their profession, such as the EN, they can expect to deal with this daunting prospect at any time in their career (Foong & MacKay, 1996; Hutchinson et al., 2011). Unfortunately for the EN, who starts at two levels below the much-cherished nursing officer rank, they might have to go through this phase twice or more before reaching the BSN or nursing officer rank. As well, the longer an adult learner waits to academically advance, the more challenging the school adaptation will be, consequently needing support or a lot of it (Dowswell et al., 1998; Wall et al., 2018). It is argued that there is a tendency to get used to the status quo and lose sight of the advancement target. Whether ENs know this or not, sometimes the decision to return to school may not be fully in their control, as other factors dictate circumstances (Gordon et al., 2013; Melrose & Gordon, 2011). However, there needs to be strong self-drive to achieve this at the earliest optimal time, as later may be more difficult and the consequences even greater. Nevertheless, ENs need to recognize their personal circumstances and make best informed decisions on when it is best for them to advance, since it's not a one size fits all type of approach, as people may

have priorities organized differently. Consequently, these ENs need help to surmount the dispositional barriers that lie in their way.

Evidence suggests that ENs who had been separated from the educational environment for numerous years took a longer period of time than traditional students to develop a sense of autonomy and confidence (Hylton, 2005). Further, they even tend to become afraid of trying to return to school. They also tended to be anxious about succeeding academically and feeling out of place. Their scare was usually that they have forgotten a lot of the important book knowledge, and this could be worse if they have been out of professional practice. They also felt somehow lost, uneasy and lacked confidence in themselves and their abilities to succeed in the course (Cook et al., 2010). This may even be aggravated by constant and insensitive reminders in their environment. As well, educational systems tended to unrealistically view them as aggregated from their whole selves, yet this was not possible for them, and success for them was dependent on these very family social and economic backgrounds that educational institutions wanted to separate them from (Stone, 2008). It should be noted that these adults often have multiple, strongly held non-school commitments and responsibilities that are part and parcel of them while the education is seen as the added and outsider role, hence it ought to fit in their schedule and not the other round (Hutchinson et al., 2011; Kenny & Duckett, 2005). And some of these commitments such as working/employment were the very source of funding for livelihood and tuition. Therefore, educational institutions need to work around this challenge and contribute to a solution and not the other way round, hence an ingeniously crafted balance needs to be found.

Dispositional barriers among ENs could also include things such as language problems and health challenges (Hutchinson et al., 2011; Tower et al., 2015). While these may not necessarily stop participation, they can generate fear and delay decisions to return to school.

Unfortunately, these dispositional barriers are reported less and/or transferred to other areas because they reflect non-traditional students' weaknesses (Hutchinson et al., 2011; Webb, 2001). It has been argued that this leads to underreporting of dispositional barriers, hence denying them the opportunity of support. Instead of admitting that one was not very eager to participate, it might be more comfortable to blame non-participation on external barriers (costs, family responsibility, etc.), while others outrightly hid the fact that they were even ENs (Hutchinson et al., 2011). Therefore, not all dispositional barriers may easily be confessed, and this may limit the construction of solutions for them, hence delaying the seeking of EN-RN advancement.

2.6.7 Institutional barriers

The type of educational programs available for ENs advancement is a key determinant for access and success. EN transition expectations for program design are different from those of younger pre-license learners compared to experienced ENs, therefore they need program designs that target them and also want to be treated differently so as to have a favourable experience (Tower et al. (2015). Learning from the recent work of Tower et al. (2015) the source of struggles was identified and reported to be mainly academic and institutional challenges that emanated from program design, much of which should be modifiable. Even though the population in Towers study was headed for a BSN and not an RN, it was still useful to inform the factors influencing their experiences in seeking advancement from the EN. In Uganda the EN education advancement context, flexible scheduling and support structures are quite bleak, leaving students to struggle on their own.

The institutional barriers that have been found to work against adult learners hence inhibiting their participation in educational advancement include lack of flexible scheduling such as evening, night, weekend, and online courses; It has been reported that inconvenient time schedules and lack of suitable programs are some of the institutional barriers, (Kenny & Duckett, 2005). Evidence shows that the institutional factors are critical, particularly the flexible scheduling and hence need to be carefully considered (Dowswell et al., 1998; Kenny & Duckett, 2005). Institutional facilitating factors such as flexible scheduling may be a key element in solution building when seeking to promote educational advancement of ENs and this may be viable for Uganda and other low resource environments whose ENs struggle to advance to the RN.

It has been argued that challenges that institutional barriers present can be emotionally taxing for adult learners, hence ought to be carefully considered for solution building which can be through an EN advancement framework or new program designs (Melrose & Gordon, 2011). Course scheduling conflicts and limited course offerings have also been identified as major institutional barriers, to ENs educational advancement as students often struggled to balance study, work and domestic responsibilities (Suttle & McMillan, 2009). Evidence shows that students wanted to enrol in accessibly scheduled programs, that had relatively flexible course schedules, and that were supportive of adult commitments (Melrose & Gordon, 2011; Webb, 1999). Non-traditional students tended to seek out more flexible programs and were more likely to enrol in distance education. Therefore, the lack of flexible programs/scheduling was a key barrier.

Considering the work and family commitments of ENs in low resource environments, it was probable that they were more attracted to flexible programs that recognized their commitments and that worked out solutions for them. Flexible program designs ought to be a key ingredient of any educational advancement framework targeting non-traditional learners. The majority of ENs were usually working-class prospective students, hence needed suitably flexible programs that allowed them to advance their careers while continuing to work at the same time.

Some schools or colleges have attempted some ad hoc flexible scheduling to be able to reach out to non-traditional students. However, if not well planned they may not be as effective as expected. Hence there is a need for careful consideration of the elements in the attempted flexible design and this must be well-targeted to the program niche realities. While some evidence exists to prescribe the likely flexible design elements needed for non-traditional student programs, this has largely been developed from studies conducted in HIC and therefore the proposed solutions tended to favour online studies which were still not practical for LIC (Melrose & Gordon, 2011). Due to the lack of well synchronised scheduling, some scholars have reported that even if some forms of flexible programs were offered, the experience was still described as difficult and stressful (Ralph et al., 2013; Wall et al., 2018). This is the case of flexible elements being thrown into a program without careful and coordinated consideration. It therefore follows that planning programs for non-traditional student's needs careful attention-to-detail and alignment to the target population and their world realities. For example, the construction of a flexible program that targets working ENs and requires them to attend school on the days that they would be at work, such as days between Monday and Friday seemed to be mis-informed. This attempts only to solve part of the problem, as the working ENs will need to negotiate permission from their employers because the time proposed for school conflicts with work schedules. This means that those ENs who can't get permission will not enrol in the program. As well, those whose work is restricted to the expected study days cannot also enrol in the program. Unlike in-patient facilities, many primary healthcare workplaces tend to work Monday-Friday, hence their ENs only have the weekend as their available personal time on which they would have engaged in advancement education. In another example that had constructed an online program with requirements to move to hospitals for clinical placements away from their home areas, rural ENs found it difficult and stressful to coordinate moving away from their family homes to complete prolonged clinical placements in different locations. It was also stressful for those who used online and computer-driven learning, especially if they had not

used computers before (Rapley et al., 2006). Therefore, when planning a flexible program for non-traditional students, all aspects of student realities and facets of courses must be carefully pre-thought, planned and sequenced with the EN adult learner and his/her resources being the centre of this program construction. Therefore, intentional, and regular consultation with ENs was required as they constituted key stakeholders. The concepts of building flexibility and responsiveness to realities should be emphasised as much as possible, as these were key barriers.

Rather than one flexible design being assumed to fit all, flexibility could also be structured to allow its consideration at various phases of the program. And even with flexible schedules family commitments can hold one from advancing, therefore, careful program scheduling is critical, to allow even those experiencing temporary family or other challenges to advance (Webb, 1999). Consequently, the idea of a flexible program should be one that is synchronised to the learner realities. These are likely to be the real challenges for ENs in low resource environments like Uganda.

Literature is lacking on the practice of self-determined pacing or self-paced learning. The practice has been to prescribe both content and duration for how long to learn the content, however, gaps remain to improve this approach and to move towards prescribing content to learn and not duration so as to allow learners determine how long they want to stay on the course. This should lead to a concept of self-determined pacing where the learner is not restricted to learn in a limited time frame. This would allow learners to carry the load they felt they could manage at a particular time.

While the online platform has been suggested as a key driver for dealing with flexible challenges (Bigirwa et al., 2020b; Kenny & Duckett, 2005; Melrose & Gordon, 2011), other studies have confirmed that the challenge of unreliable internet availability in nursing and midwifery schools was real and therefore construction of online learning may not be a feasible solution (Bigirwa et al., 2020b; Lovett & Gidman, 2011). Therefore, the consideration of online learning as the main driver for flexible program designs needs to be taken with caution and careful consideration of the EN program target population. Emphasis on technology-driven programs and curricula, on the premise that technology offers new ways to structure the way learning and teaching can be organized, including through open, online, and blended learning to increase flexibility and teacher-student interaction, it is still a delicate matter for low resource environments and needs to be pursued carefully, if at all. Of course, the experience with COVID19 pandemic was a surprise game-changing development, but caution is still needed in recommending technology driven learning in LIC. It can be

argued that use of technology in learning is still in its infancy, in LIC and therefore could not be suitable as the main framework/platform to deliver EN advancement education. At country level, Uganda had made some developments by developing the national policy on ICT and proposing the role of ICT in fostering lifelong learning opportunities, however, tangible utilization of this ICT within programs targeting ENs still remains unfelt, and this may be attributed to glaring obstacles/barriers that hamper the use of technology to enhance learning. An attempt was made to support enrolled midwives' advancement to registered midwifery, however, this has been heavily challenged and recent studies put the quality of learning at only 44.9% (Bigirwa et al., 2020c). The main EN advancement challenges were related to poor internet connectivity; poor electricity supply; limited access to peer-reviewed journal articles; difficulty in meeting costs of internet access; and inadequate and uncondusive classrooms.

Although literature has been prevalent on flexibility barriers, there exists other institutional barriers such as difficulty in dealing with admissions and advising staff; reasonable distance to school; high enrolment fees; challenges with availability of faculty (Boot et al., 1988). Further, the pedagogical approach needs to be improved to enable a more adult-focused approach to nurse education (Lovett & Gidman, 2011).

2.7 Facilitators

Facilitators were seen as those measures that enabled and supported educational advancement. These facilitators are to be beyond passive motivating factors in the sense that motivators may increase or strengthen the interest but may not provide facilitating solutions or enabling pathways to the solution. For example, the prospect of better pay is a motivator but not necessarily a facilitator, because it increases the interest but does not provide a practical solution or enabling pathway to the solution of enrolling into educational advancement. Those ENs who have failed to enrol into advancement programs need facilitators to make the right steps towards enrolling in advancement programs. The prioritization concept fronted by some scholars sounded convincing, but there has to be enabling circumstances/facilitators for ENs to convert to RN, (Wade, 2001). Short of these enabling circumstances (facilitators), then educational advancement cannot happen and ENs remain unhappy as a key goal remains unmet. Motivators could be either intrinsic (arising from the self or within) or extrinsic meaning arising from outside the person or within the environment. While intrinsic motivators were also useful, this study considered those

motivators that supported taking of an action, which was seen as facilitating hence the term facilitators. This view was what this study saw as facilitators and was also seen to be more relevant in the real world of ENs struggling to advance to the RN.

Some of the literature did not separate motivators and facilitators, in such cases, this study discussed them as such. This study also appreciated that some motivators could heighten interest and eventually lead to action, if the circumstances were right, hence some motivators have also been included in this study. However, they don't change the rationality of facilitators because these facilitators are still needed to support and enable action-taking, hence leading to the desired change. Literature suggests that the ENs desire to advance their career to RN could be motivated by the improved career opportunities and salary of the RN, (Boot et al., 1988; Care, 1993). This study assumes that many motivators for EN educational advancement have been known and that the known motivators have already aroused interest among the ENs. But the advancement was not happening in numbers that would be commensurate to expectations because of the lack of facilitators or enabling circumstances. Therefore, the question to address should be, what are the facilitators needed to enable/accelerate the enrolment of ENs into educational advancement to the RN. In the construction of the facilitators, it was crucial to know the barriers so that the matching facilitators could be constructed. Although the EN educational advancement process is complicated by numerous barriers, there are some facilitators and motivators that may make the pursuit possible, eased and worthwhile.

Some demotivators or deterrents have also been identified, such as a sense of abandonment and the feeling that the EN was a dying cadre especially when the context was that of phasing out ENs (Boot et al., 1988). Although these negative factors generated unpleasant experiences, in some ways they also generated momentum and motivation for ENs to stay relevant hence advance their education to the RN level. Iley (2004) noted that occupational changes and challenges in nursing motivated some ENs to advance their education to RN and access better offers and offer better patient care. Iley argued that even though the EN cadre was challenged, the expectation of increased job satisfaction was also seen as a motivation for them. Although Iley's study was with a non-homogenous population of ENs at various levels of the EN-RN advancement continuum, the sample was large (2,968 respondents) and was rich with findings from each stage of the continuum. While similar motivation existed for the Ugandan EN, the lack of facilitating factors left them unsupported to take action. Therefore, facilitators that supported the taking of relevant education advancement action were needed.

Some of the facilitators that adults considered while deciding to enrol in higher education were time out of school; possibilities for intellectual, personal and career opportunities; institutional support; synchronizing learning and earning; reflective learner; and match with an academic reputation, all of which needed action (Hill & MacGregor, 1998b; Kithuci et al., 2017; Melrose & Gordon, 2011). Consequently, these are the variables needed in constructing facilitators for EN-RN advancement. Findings such as these could be useful in designing facilitators along the same lines to build enabling pathways for ENs to advance. For example, the variable such as synchronizing learning and earning, it calls for careful designs of education programs that make it possible for ENs to work and study at the same time, especially considering that enrolment into educational advancement was not a singly informed decision, but an interaction of many factors. If each of these interacting factors was clearly known and carefully considered, then appropriate facilitators could be constructed leading to better enrolments into educational advancement, especially for those in LIC.

As will be seen in the model guiding this study, these factors were classified as situational, occupational, and institutional factors. In their quest for educational advancement, ENs sought to balance educational advancement with their responsibilities which involved commitments with the employer, family, friends, and identity as a learner (Cook et al., 2010; Tower et al., 2015). So, in looking at facilitators for EN educational advancement, one needs to be comprehensive and consider all facets of the influencing spheres, as leaving out any one of them could deter/complicate the EN advancement hopes. There is hope that with ingenious effort applied, facilitators can be constructed from all the perceived barriers, and should be context informed so as to be relevant to LIC.

While all spheres of a person's life can influence their educational advancement, the most likely spheres to modify and create facilitators were the institutional and situational. Therefore, Institutional facilitators could come from areas such as reasonable time taken to complete the course, courses being offered at a convenient location, the ability to relate to other students in the program and readily available technology support. Evidence shows that when considering a solution for institutional facilitators, these should include the availability of desired programs of study; preference of study days and times; locations of course offerings; low direct and indirect costs related to the course; and faculty reputation for high quality teaching (Kenny & Duckett, 2005; Lakati et al., 2012; Melrose & Gordon, 2011; Tower et al., 2015). Considering the cultural, social, economic differences between developed and developing societies where these studies have been done, there might be

context variations in the types of facilitators sought or perceived to be helpful for EN educational advancement in a low resource environment such as Uganda (Lovett & Gidman, 2011).

Still within the space of situational facilitator's literature, it was suggested that employment was a key sphere in which the construction of facilitators was possible and should be considered (Dearnley, 2006; Melrose & Gordon, 2011; Suttle & McMillan, 2009). This had a strong facilitator-capacity to influence adults to make the decision to enrol. The earning from employment enabled non-traditional students or ENs to support their livelihood and that of their families including significant others, hence they could not do without it. Therefore, education institutions must be cognizant of this reality and be ingenious in their program designs to construct well-balanced facilitators that don't conflict with employment. Various and ingenious collaborations between the employer and the education institutions ought to be carefully sought. As well, any other support that could be accessed through the employer was seen as facilitating enrolment for these non-traditional students. These included things such as tuition support, other cost support such as transport, books, placement sites, flexible work arrangements to provide time for school, or even any form of employer and supervisor encouragement (Kithuci et al., 2017). It was noted that these reduced the fear and stress that accrued from balancing work and educational advancement. While considering the utilization of evidence, it is key to keep the facilitator construction in alignment to the local context where it would be utilized, as there could be elements that require context specific approaches.

Higher educational institutions need to make serving the adult non-traditional student a central part of their support system, and faculty need to understand how to deal with them in the learning environment (Melrose & Gordon, 2011). A key concept at the centre of this should be flexibility in designing the structure of their educational programs and aligning it to the target niche, in this case, the EN. The duration of programs needs to be reasonable and consultatively informed to be facilitative in improving their enrolment into educational advancement. Scholars also argue that the method of facilitating learning for non-traditional students' needs to be cognizant of their preferences and lifestyles (Hutchinson et al., 2011; Lovett & Gidman, 2011). Otherwise, if education was not centred on the ways of its clients, then how could it possibly claim sensitivity to learner-centeredness? Therefore, intentional construction of facilitating/enabling interventions, no matter how small, should be encouraged as they could promote adult learners such as ENs, to transcend their limitations and venture into educational advancement. Accommodation of these special needs can

facilitate the enrolment decision-making processes of these non-traditional prospective students and hence accelerate their enrolment into advancement programs. Educational institutions should not fear investing in these facilitators, and it should be noted that some facilitators may not be utilized by all students, therefore the cost may not be a factor multiplication of the total number of students enrolled. For example, a facilitator such as arrangements for childcare facilities would only be utilized by those who have children, hence the cost to avail the service may not be prohibitive.

Of course, designing these facilitators may not be a one size fits all type of interventions, but to be carefully considered contextually. For example, things such as readily available technology support may not be applicable in low resource environments where education was not driven by heavy reliance on online structures, nevertheless, when needed it should be considered. Already studies done in Uganda into this area, even though not for nursing, indicate that investment and utilization of online learning has been very low (Bigirwa et al., 2020c). Even though the COVID19 pandemic had ramifications that could turn the general outlook of online learning, facilitators ought to be carefully context informed. However, some interventions can cut across spheres such as socio-economic differences.

Simple facilitator interventions such as educational institutions providing a forum for prospective learners to connect with those who are already enrolled in programs, provides an opportunity to discuss how to juggle the demands of learning, earning, and living; and can result in removing fears and other strongly held negative notions hence leading to improved decision making which could lead to better enrolments.

Looking at the available evidence, many of the studies considered stood at the enrolling or converted point, on the career advancement continuum, having utilized populations of students already in the program (Cook et al., 2010; Schultz, 1993; Wall et al., 2018). While they contributed vital understanding of the EN needs for advancement, they don't tell us much about the EN candidate who is unable to enrol, which leads to a gap in understanding needed facilitators for supporting ENs struggling to advance. Therefore, there is still a gap in the literature to explore facilitators from the point of view of ENs who have not yet converted to RN. Arguably, they may have peculiar defining characteristics that when uncovered and matching facilitators constructed, could enable educators improve their programs to target this niche with better precision, hence leading to accelerated enrolments. Further, criticism of the literature is that several articles used small sample sizes and convenience samples (Dowswell et al., 1998; Hylton, 2005; Paech, 2002). Nevertheless,

some studies utilized significant sample sizes hence making generalizable contributions (Boot et al., 1988; Iley, 2004). ENs face considerable barriers in seeking educational advancement, but the impact of these barriers can be reduced by developing matching facilitators and strategies that support ENs in their advancement pursuit.

2.7.1 Collaboration

EN advancement programs need to be facilitative, with participants having access to a part-time programs, school mentors and work-based supervisors to support ENs to meet their advancement needs (Hill and MacGregor (1998a). A tripartite arrangement where the school collaborated with the workplace, teachers and clinical managers resolved several challenges for ENs ahead of the program starting, and remained committed to support the EN throughout so as not to undermine the program (Hill and MacGregor (1998a).

2.7.2 Preparation programs

Because the advancement seeking has been challenging, Wall et al. (2018) created a phase/stage of the student transition journey called ‘preparing to move in’ which highlights some of the concerns ENs had struggled with shortly before starting advancement education. While it focused on ENs who were starting school, it remains useful to inform what ENs struggle with to make decisions for educational advancement. As well, this is the period in which some ENs who attempt to advance, come to terms with certain realities and have failed to overcome them, hence being unable to start school. This may be due to some expectations not working out, hence leading to failure in enrolling and more stress hence worsening their already challenging advancement-seeking experience. All this could lead to frustration in their educational advancement seeking experience. Some of the struggles that ENs had around this ‘preparing to move in’ phase included, determining personal goals related to their new career as an RN; developing expectations of the program; establishing a balance between employment, individual and anticipated advancement responsibilities. In recognition of the challenging experience ahead, Wall et al. (2018) proposed an intentional orientation/bridging program and a purposeful student mentorship program to provide academic and pastoral assistance. While these strategies could lead to improvements, they have never been applied and tested to support those ENs who have not yet enrolled for school. Therefore, this gap needs to be addressed to call for advancement programs to be more proactive and reach out to these ENs who fail to enrol. Understanding their special circumstances would lead to

construction of better and specific interventions that target this niche, hence improving the educational advancement seeking experience.

2.8 EN Educational advancement programmes

Nurses are the biggest cadre of the health care workforce and ENs are the biggest cadre of nursing. Considering that ENs are the lowest on the qualification's framework, it is crucial that their educational advancement be well planned and implemented (MoE&S, 2016). Literature mapping better patient outcomes to nurses level of education is prevalent, hence it's clear that whichever country wants to efficiently improve their health indices, it has to think about the level of education of the majority of its nursing workforce. Evidence suggests that for upgrading the number and quality of the nursing workforce, emphasis be more directed to the nurses who constitute majority of the workforce and in many Low Income Countries (LICs) these would be ENs (Allan & McLafferty, 2001; Kithuci et al., 2017; Lakati et al., 2012). Knowing that these nurses are working, their advancement education should happen through carefully planned and implemented programs, with a well-articulated career advancement framework. Even though there has been some criticism that nursing education is not the only variable to change care outcomes, and will not work in isolation of other variables, it should be noted that it is a key variable in driving better quality care and hence better patient outcomes (Allan & McLafferty, 2001).

2.8.1 The education system

The current education system for ENs in Uganda started way back in 1930 with a pre-license niche for the training of full-time residential programs, and when new and senior levels such as the RN were introduced, it became apparent that ENs had to advance. Because the initial training for RN targeted a pre-license niche, the program was also structured on the full-time residential model. At the time of initiating ENs to advance to RNs, there should have been need to redesign how working ENs would access this program, considering that they were a non-traditional niche. Unfortunately, the type of education targeting these advancing ENs remained on the same structural design framework as that of the pre-license student education. This meant that working ENs with families had to come to a full-time residential program. At the time, the numbers were quite small and heavily supported by the government, hence things seemed to work well. The support while not limited to this, included, tuition support, study leave with pay, other material support, and families remained

in institutional houses while the nurse went to school. The advancing education system/framework did not prepare for when things would change, hence did not recognize and adequately plan for these ENs as non-traditional students, hence future scenarios where a big number of ENs would need to advance, moreover with limited or no government support was not envisaged.

Consequently, advancement education system for non-traditional students was implemented as if it were for traditional students. Even in the early 2000s, two-thirds of the nursing institutions were owned by the government and one third by non-governmental organisations (NGOs) and entrepreneurial companies or individuals. Meaning that even by this period government contribution to nursing education was still substantial, hence not allowing exposure of the EN-RN advancement education design flaw. However, this kept dwindling until around 2010 when the government contribution was substantially low. This trend has seen NGOs and private players owning two thirds and the government owning only one third or less of the nursing schools. Since private schools were significantly financed by collectables from students, they became expensive as costs had to be passed to students. Since the schools had to follow a business viable model, their location was mainly in urban centres and townships, and even though they were distributed in various regions throughout the country, they remained inaccessible. The huge benefits previously enjoyed by being supported by government were no longer available. Therefore, the advancing ENs had to meet their school fees, family and school accommodation, including other indirect costs. This was worsened by the fact that the education system was not designed to allow work-study arrangements.

2.8.2 Matching niche to program design

Knowing that non-traditional students have had a life-changing event which caused the student's mind-set to change from that of a traditional student, their education needs to be designed following their characteristics. These life-changing events may include extracurricular obligations, such as employment and family commitments, which limit the time these students have for engaging in educational advancement. As well, for these non-traditional students', education is not their primary preoccupation or engagement activity; they would have another activity on which their livelihood usually depends, (Hylton, 2005; Lakati et al., 2012; Suttle & McMillan, 2009). Therefore, the type of education programs that target them for advancement need to be well synchronized to meet their time and other resource limitations. Simply running non-traditional student education on the framework of

traditional pre-license students from high school is a mismatch, and it is cumbersome for the non-traditional students.

Most of the education programs for these ENs in Uganda, who are non-traditional students, is implemented on the full-time residential framework for traditional pre-license students from high school, who have different demographic characteristics and needs. These non-traditional students are often juggling many responsibilities and hence education for them has to be sensitive to their situational circumstances and be flexible (Kithuci et al., 2017; Ralph et al., 2013). Knowing that all ENs are usually working-class prospective students, they need suitably flexible programs that allow them to work and advance their careers at the same time. Scholars suggest that many working people value educational advancement, on a prioritized ranking of work, family, and school (in that order); hence their work and family tend to take priority over the school (Gordon et al., 2013; Tower et al., 2015). As ENs start their vocational career at the lowest level, their continued educational advancement will always compete with other roles such as worker, spouse, parent, homemaker and will often be given less priority (Hylton, 2005; Tower et al., 2015). Yet, failure to actualize this advancement can also lead to frustration. Therefore, a careful balance needs to be considered at each stage of their advancement to ensure that conflicting their roles and goals is avoided.

2.8.3 Model designs for advancement education

In response to evidence of struggling ENs seeking advancement, many HIC have invested in planning educational interventions that have led to the advancement of significant proportions of their nursing workforce (Boelen & Kenny, 2009; Hill & MacGregor, 1998a; Hutchinson et al., 2011; Kenny & Duckett, 2005; Melrose & Gordon, 2011; Suttle & McMillan, 2009). As well, they have also carefully planned and implemented strategic initiatives that have improved educational advancement for their lowest cadre nurse, for whom in many countries would be the EN or their equivalents. In due course the design of educational advancement programs for non-traditional students such as ENs has moved on, further away from the residential full-time programs to more flexible and well-synchronized programs that match the learner needs (Boelen & Kenny, 2009; Melrose & Gordon, 2011; Suttle & McMillan, 2009).

Some of the model designs that have been found useful are online and all other technology-driven learning programs including all their various derivatives such as blended learning; work-based programs; weekend programs; evening programs; modular and various

forms of distance education (Boot et al., 1988; Kenny & Duckett, 2005; Kithuci et al., 2017; Melrose & Gordon, 2011). Analysing these flexible arrangements shows that changes involved included venue where education was delivered; the platform for delivering it; the time of day; the day of the week; provision of convenience for the learner to make choices; and duration of the program. Of course, prior to their implementation a lot of planning had to be considered including strategic stakeholder involvement and key evidence consideration.

Many of the EN advancement programs in Uganda have not benefitted from the numerous flexible education developments that exist in literature and HIC. For example, of the slightly more than 100 nursing schools registered under the Business, Technical, Vocational Education and Training (BTVET)/ministry of education, only 41 can offer EN advancement education and all of them run on the full-time model. This is not in tandem with the literature (Boelen & Kenny, 2009; Kithuci et al., 2017; Wall et al., 2018; Webb, 1999). Neither is it utilizing known evidence for developing non-traditional student programs targeting working people. Instead, the current framework on which EN advancement education is constructed is a straight institutional barrier that should be changed. As earlier indicated, it is clear that ENs are adults with work and family obligations and hence their advancement education should recognize and plan around these realities. It's not clear why attempts of offering flexible EN advancement education have not been taken up by many of these schools nor promoted by the regulation in charge of these programs. As well, it's also not clear why the midwifery e-learning design by AMREF has not been extended to nursing, perhaps it could be the challenges experienced with the online model (Bigirwa et al., 2020c).

It is known that not all ENs will benefit from one flexible design, hence a multitude of designs should be considered to offer a variant menu of choices to ENs. Ugandan educational advancement programs targeting ENs should redesign their offering to correspond to the specific needs of ENs and consider the available study time and resources. Since ENs constitute a significant percentage of the nursing and healthcare workforce in Uganda, advancement programs ought to target them with precision and without jeopardizing health care delivery nor family commitments. This requires innovative, flexible and matching program designs and frameworks (Kithuci et al., 2017). Therefore EN-RN advancement cannot be met by traditional methods alone, hence programs must be willing to be creative and innovative (Suttle & McMillan, 2009).

Further, evidence suggests that EN advancement programs need to be supported through well-articulated advancement frameworks; recognized career structures flexible enough to provide career mobility and provide access to various nursing practice

opportunities (Kithuci et al., 2017). However, it is observable that Ugandan programs supporting EN educational advancement fall short of these recommendations. The level of EN support and flexibility of programs are inadequate or non-existent. Flexible education designs are part of the critical contributing facilitators for improving access to higher education (Boelen & Kenny, 2009; Melrose & Gordon, 2011; Paech, 2002; Ralph et al., 2013; Suttle & McMillan, 2009; Wall et al., 2018), yet flexibility is still missing in the current programs targeting ENs advancement in Uganda. Beyond scheduling-flexibility, literature suggests that ENs also need ingeniously structured programs such as the EN-RN-BSN programs, options for choice of time of day and day of the week, among others (Paech, 2002).

Flexible education designs are common in postgraduate education however, they are lacking in the Ugandan post-basic (vocational) sector, especially at the post EN level. Such flexible designs are generally scarce in the developing world, and research on the educational advancement of ENs in low-resource settings is scant, much being driven by policy and administrative decisions. It is unknown why the majority of Ugandan EN advancement programs have not utilized knowledge of flexible designs already implemented in the developed world. It is plausible that a lack of context-relevant evidence may have prevented progression and investment in developing attractive flexible educational advancement designs for ENs. Further, it could be partly because the ENs situation is contextual and the poor educational infrastructure in Uganda struggles to support known designs such as online learning (Bigirwa et al., 2020c). As well, the ENs are often not technology savvy to enable them to access technology-driven learning and would certainly be challenged as they haven't been using technology as a main driver for their learning (Kithuci et al., 2017; Rapley et al., 2006). If not well designed even non-residential programs that require daily movement to the learning campuses may have ENs getting challenged due to the cost of expected frequent travel between home, school, and workplace, given their low remuneration. Further, the low workplace-staffing levels may also not sustain paid study leave for programs requiring EN full-time attendance at school, hence requiring a delicate balance in designing a successful program model.

All these factors make it difficult to just fit already known innovative designs developed in HICs, into EN-RN advancement education, in low resource environment contexts, such as Uganda. The way forward is to develop suitable advancement programs for ENs as informed by the perspectives and needs of the relevant stakeholders, of whom ENs who have failed to advance are key. The gap remains to interrogate the context of Uganda

and propose a suitable educational advancement framework for ENs. This study intends to focus on this by generating model elements needed to design accessible programs for ENs in Uganda.

2.9 Gaps in the literature

Table 18 provides a summary of what is known and what is not known. Most of this literature on EN educational advancement was over 10 years old (Boot et al., 1988; Dearnley, 2006; Dowswell et al., 1998; Foong & MacKay, 1996; Hill & MacGregor, 1998a, 1998b; Iley, 2004; MacGregor & Hill, 1996; Rapley et al., 2006; Suttle & McMillan, 2009). The literature originated largely from the developed world such as in Europe, Australia, Canada, and the USA leaving a gap for context relevant evidence from LIC (Boelen & Kenny, 2009; Cook et al., 2010; Dearnley, 2006; Gordon et al., 2013; Melrose & Gordon, 2011; Ralph et al., 2013; Suttle & McMillan, 2009; Wall et al., 2018).

Table 18: Summary - what is known and not known

What is known	What is not known
EN Experiences and aspirations	
<ul style="list-style-type: none"> • EN advancement experience is challenging and stressful. • ENs were seen as not measuring up to the challenge and this caused them to be frustrated. • Struggled to balance work, family, and school. • Juggling many responsibilities due to significant personal, social, and professional commitments. • Making the decision to enrol was complex and multifactorial. • Scared due to role phasing out. • stressful experiences outweighed by the satisfaction of successful conversion. • Negative labelling in the advancement program. • ENs aspired to advance to the RN. • Aspiration was related to career change, staying relevant, realizing a lifetime goal, improved economic ability, and meeting a job requirement. • Needed support and counselling. • The need for support was misinterpreted as weakness among advancing ENs. 	<ul style="list-style-type: none"> • The EN advancement-seeking experience was not well articulated. What ENs go through in seeking to enrol and finding an accessible program isn't articulated. • Family dynamics that ENs juggle are not well articulated. Role of family in influencing EN advancement not clear. • Extent of negative labelling in workplaces not articulated. Beyond the regulatory phasing out, other work-related demeaners for advancement not articulated.
Barriers and Facilitators	
<ul style="list-style-type: none"> • Balancing school, work, and family commitments. • Lack of support during role transition • Financial hardships, limited access to scholarships, indirect costs. • Inflexible work schedules. • Lack of support from their seniors especially in the workplace. • Low self-esteem; un readiness for course rigors; fear and self-doubt to meet expectations. 	<ul style="list-style-type: none"> • Family barriers not well articulated. • Not clear if impact to females as same as males. Impact of family demographics not articulated i.e., number of children and involvement of spouses and dependents. • Financial challenges not articulated to point to areas not financed. • Support from work-based supervisors was limited to encouragement, more areas not articulated. Indirect costs not fully articulated.

<ul style="list-style-type: none"> • Lack of flexible scheduling. • Pedagogy that is not sensitive to adults. • Flexible scheduling. • Flexible schedules heavily supported by use of technology. • Collaboration. • Staying in employment and earning. • Other work-related support towards schooling. • pre-enrolment preparation programs. 	<ul style="list-style-type: none"> • No barriers related to policies or regulation. • Don't know what flexibility should be utilised in low resource and low technology environments. • Areas to target in the pre-enrolment support programs not clear. • Issues raised by these preparation programs have never been applied and tested to support ENs who have not yet enrolled for school. They only targeted those who had been enrolled/admitted. • Spectrum of support needed by non-admitted students remains unknown.
Advancement Programmes	
<ul style="list-style-type: none"> • Articulation of an education system. • Model designs for advancement education. • Matching niche to program design. 	<ul style="list-style-type: none"> • No evidence on the number of advancement programs Vs demand, and their geographic spread including their impact on access. • No evidence on model programs or scheduling for LIC.
Context	
<ul style="list-style-type: none"> • Literature has mainly investigated ENs who have already enrolled in programs. • Evidence is mainly from ENs in HIC, i.e., England, Australia, New Zealand, USA, and Canada. • Much of the literature is dated. 	<ul style="list-style-type: none"> • Current literature did not consider non-enrolled ENs. • Evidence did not target ENs in LIC. • No new literature targeting ENs.

Whilst there is high quality research, the literature seems to present one side of the story, predominantly the views of a population who have already enrolled in advancement programs or completed them (Dowswell et al., 1998; Hill & MacGregor, 1998a; Paech, 2002; Rapley et al., 2006; Wall et al., 2018). There remains a gap to bring out evidence from those who have failed to enrol in advancement programs and in particular, evidence from the developing world, such as Uganda. It is possible that the life circumstances or barriers that affect some ENs from advancing may be different from those ENs who have been successful to enrol in advancement programs. Even if the circumstances were to be the same, the impact and response from those who have not yet enrolled is likely to be different and can contribute new learning, bringing out the very reasons that held them from seeking educational advancement. This will provide an opportunity for the educational system to improve how

EN-RN advancement programs understand this special population and target them. Bringing out their story, this study explores their experiences, aspirations, needs, barriers, and facilitators. It will examine the suitability of current Ugandan EN advancement programs in meeting EN education needs, bringing knowledge together, to identify the elements that need to be considered in designing flexible advancement education for ENs and a new educational advancement framework for ENs in Uganda.

2.10 Chapter summary

This chapter has provided extensive evidence and discussion concerning various aspects of the EN advancement field. It delved into their experiences, aspirations, needs, barriers, and facilitators concerning the EN educational advancement field. The evidence presented was mainly from HIC and indicated that it was known that ENs were struggling to balance advancement education with family and work commitments (Boelen & Kenny, 2009; Dowswell et al., 1998; Hill & MacGregor, 1998b; Hutchinson et al., 2011; Hylton, 2005; Iley, 2004; Melrose & Gordon, 2011; Parry & Cobley, 1996; Ralph et al., 2013; Tower et al., 2015; Wall et al., 2018). Further, the evidence was mainly from a population of ENs who were either in advancement or completed the advancement (Dowswell et al., 1998; Hill & MacGregor, 1998a; Hylton, 2005; Paech, 2002). However, there was no clear evidence to confirm the aspirations experiences and needs for the ENs in LIC such as Uganda and to confirm whether they were struggling to access EN-RN advancement education. The chapter also discussed the known types of facilitators that would attract ENs to consider advancement and potentially improve the education advancement for ENs (Allan & McLafferty, 2001; Boelen & Kenny, 2009; Gordon et al., 2013; Melrose & Gordon, 2011; Suttle & McMillan, 2009). What is known is largely from HICs leaving a gap for context relevant evidence in LICs. The next chapter presents the theories relevant for this study.

Chapter 3: Nursing Advancement Education Theories and Models

3.1 Introduction

Adult and continuing education model and theory development has mostly been studied during the 1960's to the early 2000's. The mainly descriptive work predominantly focused on participants who were enrolled in study programs and highlighted concepts related to the actual dynamics of fitting adults into educational advancement programs (Bennett, 1990; Stein, Wanstreet, & Trinko, 2011; Wall et al., 2018). Some studies examined why students failed to enrol on educational programs which was important to understand theories surrounding the concerns of adults seeking educational advancement (Boeren et al., 2010; Hearne, 2018; Merriam, 1993). Types of programs to support the educational advancement of adults, were studied (Cross & Zusman, 1977; Murphy, Cross, & McGuire, 2006; Pittman, Kurtzman, & Johnson, 2014; Wall et al., 2018). The types of participants within studies were mainly vocational workers, including nursing cadres similar to ENs (Hearne, 2018; Miller, 1967). Indeed, several theories and models targeted graduate and postgraduate students or candidates (Close & Orłowski, 2015; Winter, 2015). The driver for most of the studies in adult education was related to the rapid growth in the demographic, social, economic, and technological spheres of nursing, within HICs, with little research drawn from LIC, such as Uganda. As early as the 1980s vocational and adult education were driven by needs and societal expectations (Kerka, 1986), because of rapid changes in the global economy requiring a more educated and knowledgeable workforce. For example, in response to changes in the use of technology in the workplace, many adults sought more schooling (Burns & Gabrich, 2001). This situation nearly 40 years ago reflects the current situation now within the field of nursing in much of East Africa, as a more educated nurse is demanded to keep up with changes in healthcare and disease management (Nabirye et al., 2014). For this reason, some of the theories are old but the findings are more relevant to the Sub-Saharan African context. The key theory categories discussed and examined within this chapter include:

- Motivation/barrier theories (Houle; Miller; Catalano; Aslanian and Brickell; Hertzberg; Baert, De Rick, and Van Valckenborgh; Boeren, Nicaise, and Baert)
- Age and stage theories (Levinson)
- Transition (Wall, Fetherston, and Browne)

- Decision-making theories (Stein, Wanstreet and Trinko; Cross)

These theories and models have been scrutinized to identify an appropriate underpinning theory and key concepts to inform the research development, data collection, explanation, and organisation of the study findings. A summary (Table 19) of the synthesised models and theories is provided at the end of the chapter to clarify and expose key concepts that influence ENs desire, motivation, and ability to advance.

3.2 Motivation theory

3.2.1 Goal and activity motivated theory

Theories of non-traditional students, such as ENs re-entering school, originated as far back as 1960 by Houle (1961), who reported that involvement in adult learning activities was encouraged by goal-oriented, activity-oriented or student-oriented motivation. The theory shares three motivations that drive adult learners and these were goal-oriented- referring to adults using education as a means of accomplishing clearly identified objectives; activity-oriented – referring to adults using education to meet other adults to remain active; and lastly learning-oriented – referring to those adults who seek knowledge for its own sake. The goal-oriented motivation theory was coherent for adult educators as it recognized the perceived benefit of education (Williams, 1964). With this reasoning, it is assumed that ENs would enrol for advancement programs if they saw perceived benefits. While this school of thought is aligned to the need of education advancement, it does not highlight the enablers/facilitators needed to actualize the goal to education advancement, as perceived benefits alone may not entirely enable the transition (Hill & MacGregor, 1998a). Houle (1961) who was a distinguished scholar and teacher in the field of adult learning in the 1960s had an interest in adult continuing education and knowing who continues to learn and why. He approached his research from the qualitative domain, interviewing adults from diverse socioeconomic backgrounds, who were of varied age groups, both male and female, married and single.

Scholars have validated Houle's work and found his ideas to hold, especially on goals, motivation and typology of adult learners (Boshier, 1971; Boshier & Collins, 1985; Burgess, 1971; Care, 1993; Sheffield, 1965). More people continued their education from the age of the late 20's until age 50 years than at any other time, although there was little evidence as to why this was the case. The higher the formal education of the adult, the more likely it was for them to continue building on their education, and surprisingly those with a

bigger learning gap were not the ones taking up continuing adult education (Houle, 1961). The lower the person's formal education, the weaker their support structures and connections to foster and encourage continuing education. This early theory resonates with the situation of ENs in Uganda, where structures to support advancing education have been constructed more for higher levels of nursing cadres than the ENs, leaving the lower less-educated categories such as ENs with weaker support structures.

The criticism of this education theory is that it was formed from only 22 interviews, so the data cannot be considered representative of the wider population (Williams, 1964). Further, the factors which influenced goals including the person's motivation and context in which the research was undertaken has since changed. It is also known that Houle (1961) only targeted participants already enrolled into adult education programs which completely missed students who failed to enrol, consequently could not examine how their goals were different, or what blocked their goal motivation to seek advancement. Goal orientated theory has been developed in many other fields such as sport (Ariffin & Jaafar, 2007; Roberson, 2009), management (Beitler, 1997; Palinkas et al., 2015) and psychology (Boshier, 1971) to understand the drivers for people's motivation and factors influencing a person's return to education including family background, teachers and schools, public libraries, occupations, and the examples of friends.

Although Beitler (1997) was entirely in agreement with Houle's goal-oriented, activity-oriented and learning-oriented thinking, he cautions and brings in a new and important line of thinking that the goals of learning were on a continuum and were subject to inevitable change, hence not static. He further recommends that teachers of adult learners should constantly be aware of their changing adult learning goals/needs and adjust the instructional style to match the needs of the learner. Although from an entirely different field, Roberson (2009) brings in key lessons such as moving away from local/monotonous surroundings to leisurely spaces, and the use of instruction from friends. Further, Schlesinger (2005) also validated Houle's theory, finding it congruent in describing why African Americans participated in correctional education engagements, and proving that the theory was applicable in a wide array of learning opportunities. Schlesinger found that the reason for attending learning sessions was to congregate with friends and associates, hence consistent with Houle's theory.

Questions on application of Houle's theory in today's generation of adult education may stem from the other findings in his work. While some of Houle's findings were impactful at their time of the 1960s, it is arguable that there have been significant changes.

For example, it was observed that the influence of public libraries, teachers, and friends may have changed over the years, with some of these factors gaining more importance while others reduced. Further, there have also been era changes in approaches to teaching and learning, for example it could be that at the time of Houle in the 1960s, the teacher centred approach was cherished, but this has since changed with more learner centred approaches being embraced. Houle did indicate that the type of occupation was also an influence but did not list which occupations were more likely to engage in adult education or not, neither did he provide the characteristics of these professions. Houle did acknowledge that the way in which these influences worked was varied. The criticism of the theory was that it was generated from only 22 interviews, which was not considered representative.

While these enrolled students' input could bring out some relevant information, they may not bring out all the challenges that faced ENs who failed to enrol and hence seemed locked out of educational advancement. However, the idea of ENs having motivations and goals needs to be examined to better understand what drives some and not others to advance. While the assumption that availability of motivators can lead to educational advancement seems true in some circumstances, it seems untrue to others. Therefore, motivators alone may not be enough to enable educational advancement. This study hopes to look beyond some of these assumptions to better understand why some ENs were unable to advance.

3.2.2 Push-pull theory

Miller (1967) proposed a push-pull theory in which positive driving forces encourage an adult toward participation in higher education, while negative restraining factors discourage the person. Miller's theory attempts to list out all the forces that would influence adults' participation in learning within various social strata at various stages of social and personal development. With the case of ENs in Uganda the prospects of better income, benefits, and recognition, could be positive driving forces while the lack of flexible programs, and high tuition are restraining factors. Miller argued that adult participation depended on the degree of congruence or conflict between the persons' needs and the apparent energies of the social and situational features in the choice. This was consistent with literature showing that decisions to educational advancement were multifacetedly informed (Catalano, 1985; Cook et al., 2010; Lakati et al., 2012; Malhotra, Shapero, Sizoo, & Munro, 2007). Applying this Miller's theory to the ENs situation would consider ways of lessening the restraining forces and/or strengthening the positive ones to allow a resultant swing leading to educational advancement. Therefore, Miller's theory could be useful in understanding the barriers and

facilitators through the lens of restraining and strengthening forces, which forms a key objective for this study. Miller's work was based on the theoretical work of Maslow (1943) hierarchy of needs, Kurt Lewin's dynamic theory of force-field, and the social class theories of Gans (1962) to propose premises about the participation of adults in educational advancement programs. Maslow's need hierarchy is based on basic needs (survival, safety, and belonging), which are normally followed by ego or psychological needs (recognition or status, achievement and lastly self-actualization), hence tying in to describe the areas in Miller's driving or restraining factors. Because the impact of these restraining and strengthening forces is also influenced by the wider socio-economic networks of an individual, Miller's theory goes further to outline these forces at the different social strata. This made the utilisation of Miller's theory relevant across various socio-economic ranges. Miller had borrowed some of this social stratification from the work of Warner (1936) and Gans (1962) which described social categories as lower-lower class (main targets of antipoverty programs), working class (cohesive and pragmatic, with high union membership), lower-middle class (the most active joiners and value setters in society), and upper-middle class (largely executive and professional people), each with distinct value systems, associational structures, and relationships to technological change. He suggested that survival, safety and belonging needs must be met first before an adult thought of other needs up the hierarchy. Consequently, advancement was prioritized differently across these social strata.

Miller's propositions were intended to represent the effect of various forces in motivating or demotivating the different classes to participate in the several types of adult education for vocational competence; personal and family competence; citizenship competence; and self-development. Looking at Miller's proposition, the ENs easily fit in the class of education for vocational competence. This class has two subcategories and ENs could easily fit in both due to the factors that Miller described for these two subcategories. He referred to the first subcategory as Lower-Lower Class Level. The positive forces for this subcategory included survival needs; changing technology; safety needs of female culture and governmental attempts to change opportunity structure. The negative forces were listed as action-excitement orientation of male culture; hostility to education and to middle class object orientation; relative absence of specific, immediate job opportunities at end of training; limited access through organisational ties and weak family structure. For the second subcategory of working-class level, Miller proposed that the positive forces influencing this category to advance are satisfied survival need; strong safety need; social shift to white-collar

and service jobs; changing technology; union pressures toward upgrading and presence of organisational access; job stability; and practical orientation toward education. Many of these factors described by Miller certainly relate to the circumstances that Ugandan ENs find themselves and could provide an explanation for the varied response-impact of similar advancement barriers. The negative forces were seen as fear of relinquishing belonging, and hostility to middle class object orientation. According to Miller, in subcategory one of the education for vocational competence class, the negative forces outnumbered the positives, meaning that the opportunities for educational advancement may be bleak in this group. This may explain the circumstance that ENs find themselves when they are unable to academically advance, yet they want. However, in the second subcategory the positive forces outnumbered the negatives, meaning that those at this level had better possibilities of advancing. Like Miller indicated, even at the same level there exists variances and not all ENs are in the same bracket, there are those whose support structure could bail them, hence enabling them to advance. His hypotheses have been criticized for having utilized limited research findings, (Winters, 1968). As well, the use of classes in explaining access to vocational education may have limited use in today's world, where commercialization has taken over the class. From literature it's clear that the factors in Miller's subcategories may be interchangeable, hence the sub-classification for the groups may not hold much meaning in describing characteristics of the group (Hearne, 2018; Romp et al., 2014; Sarver, Cichra, & Kline, 2015; Wade, 2001).

3.2.3 Retention model

Similar to Miller (1967), Catalano (1985) came up with a motivation-retention model in which he added another perspective for the educational advancement decision process that reflects the non-academic features of a person's life, especially emphasizing opportunity cost. His model, while standing on the existing body of knowledge at the time, helped to consolidate the factors driving students to advance higher education, applicable to the Ugandan EN context. Again he also based his work on Maslow's hierarchy of needs (Maslow, 1943) and Herzberg and Mausner (1959) motivators and hygiene factors. Catalano pooled the concept of cost/benefit (barrier/goal) with the view that, an adult's decision to re-enter school (educational advancement) would be ranked according to the importance of needs in the person's life. And that the decision was not reached in isolation but considered in twining with other related factors. This view could explain ENs quest for better remuneration and is also consistent with Levinson's prioritization concept (Levinson, 1978). Unlike the traditional pre-service students whose view to education participation may be singly

informed, Catalano clarifies that the decision to advance for adults, is influenced by many factors in an adult's life. Therefore, decisions had to be considered in perspective to many other factors and with priority. A key contribution of Catalano's model was to highlight the opportunity cost, which included school fees, books, supplies, foregone earnings, time spent studying, disconnection with social activities, and the effort expended in planning and pursuing the advancement education. Another opportunity cost identified was the time it would take the candidate to get another job if they had left the first one to go to school. This expanded the spectrum for considering the opportunity costs, to beyond the advancement program, to include the post-program return to normal business. The consideration of opportunity cost was a good development to allow adults seeking educational advancement to make a comprehensive analysis to inform their decision making. This together with other factors led to the emergence of carefully designed non-traditional educational advancement programs that lessen the impact of the opportunity costs such as income loss for adult learners, a development that could lessen educational advancement challenges of ENs in Uganda. This will be an important lesson to draw, in solving the EN advancement education situation in low resource environments like Uganda, including those countries which cannot afford to have their nurses away from workplaces for prolonged periods. With this concept, the ideal target is to lessen the impact of these opportunity costs to an already disadvantaged population of ENs and stretched health systems.

In many fields and countries, there has been tremendous progress made to reduce opportunity costs associated with an adult's educational advancement. Often, this involved carefully designed flexible programs that deliver education around adult's available time without the need to lose income (Calder & McCollum, 2013; Smith, 2003; Spanard, 1990; Tight, 2012). As well, there have been further developments on the employment side that allow flexing of work schedules to enable working adults to advance while continuing in employment, (Bassi, 1994; Bloom & Lafleur, 2000; Cervero & Wilson, 2005; Krueger & Rouse, 1998). Catalano's prioritization concept was regarded as appropriate in explaining the failure to re-enter school, but the model has neither been published in accessible ways nor validated.

3.2.4 Triggers and transition motivation theory

Aslanian and Brickell (1980) proposed a "triggers and transition" theory of motivation in which an adult's decision to pursue education resulted from significant changes in their lives, which they named 'triggers'. They had interviewed about two thousand men

and women aged 25 years or older to ascertain the timing and reason non-traditional students were entering school. They found that most decisions to pursue higher education were directly related to significant life changes such as career, family, health, religion, or leisure opportunities. They named these the triggers. Returning to school seemed in most cases to be a consequence of a change or changes in other areas of the non-traditional student's life. They found that some non-traditional students returned to school to resume their education if they were laid off by their current employer. They then reasoned that returning to school and pursuing higher education tended to be the means to affect future change or to cope with changes that had already occurred, making the decision a transitional activity, hence the name triggers and transition theory. According to Aslanian and Brickell, the "trigger" that influences an individual into education is the result of a past, present or future significant change and can be divided into one of three spheres: employment, family, and individual growth. Aslanian and Brickell reported that the timing of adult learning was directly dependent on the timing of transitions occurring in these non-traditional student lives. Taking a lesson from their theory, it therefore follows that, the knowledge of the timing of these life transitions should be key in designing EN educational advancement programs, especially because their lives beyond the first nursing education is the beginning of major life changes. This is the time they begin working, become independent, can be laid off or change jobs, sometimes take on family dependents to care for, start relationships, get married and often get children. All these and more will ultimately have an impact on the ENs capacity to academically advance. Although Aslanian and Brickell's model identifies the trigger, as the cause that sends non-traditional students back to school, literature furthers this claim away from a single event or reason and suggests that the actual decision is influenced by many factors (Catalano, 1985; Cross & Zusman, 1977; Knutsen, 2011; Romp et al., 2014; Valentine & Darkenwald, 1990). In low resource environments such as Uganda, the multifaceted nature of educational advancement decision making is quite vital in understanding how to construct ways that will facilitate/enable and accelerate EN educational advancement. While the trigger may be key, it's certainly not the only determinant for non-traditional students to return to school. In addition, the Aslanian and Brickell (1980) model used a non-specific population hence may not be able to comprehensively explain the reasons for non-traditional students who fail to enrol. Further, the Aslanian and Brickell's model suggests that the timing of triggers occurrence is directly related to educational advancement, however, this may not always be the case, should other supporting factors not prevail. While the occurrence of some triggers may not be predictable, for those whom it is, such as the phasing out of a cadre like

the one facing Ugandan ENs, appropriate responses from educational institutions to construct facilitating programs is key. Understanding ENs who have not returned to school, will need a theory or model that looks at a non-participating (non-enrolled) population on the advancement continuum, to best understand and explain their circumstances including proposing matching solutions for them.

3.2.5 Hertzberg's hygiene and motivational factors theory

Among the motivational theories, there are some theories that could be useful in explaining the EN educational advancement issue, as well. The Hertzberg's Hygiene and Motivational Factors Theory (Herzberg, 2005) also called the two-factor theory, is similar to Maslow's Hierarchy of Needs, (Maslow, 1943). It is broken down into two main units: hygiene which are dissatisfiers, and motivators which are satisfiers. The dissatisfiers could contribute to advancement barriers while the motivators could contribute to the facilitators. Even though Hertzberg's theory targets the work environment, it still can be useful in explaining the EN advancement issues, especially because ENs are a working niche, and their work has capacity to influence educational advancement. The hygiene factors are seen as working conditions, policies and administrative practices, salary and benefits, supervision, status, job security, co-workers, and personal life. The Motivating factors are recognition, achievement, advancement, growth, responsibility, and job challenges. Both the hygiene and motivating factors enlist some of the barriers challenging or facilitators lacking for ENs enrolment into advancement education in Uganda, hence could be relevant in explaining a possible solution. Hertzberg's theory states that hygiene factors must be present in the work before motivators can be used to stimulate the performance of an employee and that you cannot use motivators on employees until all hygiene factors have been met (Herzberg, 2005). While Hertzberg's theory was constructed mainly for the working environment, it can also be useful in advancing adult education more especially that of a working population such as ENs. For example, personal growth and job advancement are both seen as good motivators for an individual to pursue higher education. This may be tied to the availability of flexible programs that allow the possibility of working and studying at the same time, including staying connected to family commitments. However, the very focus of Hertzberg's theory is also its criticism. The theory is too focused on the work environment that it might be a struggle to apply it holistically outside the work environment. The construction of the two-factor theory was also informed by a study limited to engineers and accountants. Generalizing

this to other fields such as healthcare education and particularly nursing, can have some limitations, especially because both engineering and accounting are male dominated while nursing is female dominated.

3.3 Widening participation and integrated models

3.3.1 Conceptualizing of the learning climate

A key model in this sector of widening participation in adult education is that of Baert, De Rick, and Van Valckenborgh (2006). This model is more recent and tends to include several factors considered by earlier models within the sector of adult learning. The model was constructed from findings of their study that looked at ways of promoting a positive learning climate. Like Catalano (1985) and Cross (1981), the model appreciates that participation in continuing education for adults is complex and involves many facets of life and the environment. It provides acknowledgment of relevant others such as regulators, employment services, social services, and donors. The model also attempts to bring the key facets involved at different levels and these are the individual level, educational institutions level and the social context level. While it seems to be closely in agreement to Cross' COR model and the work of other theorists, it suggests a variation by introducing the social context level and the individual level. Both would represent the dispositional and situational categories of the COR model and other theorists whose work classified them as such (Baert et al., 2006; Boeren et al., 2010; Cross, 1981; Johnstone & Rivera, 1965; Lavrijsen & Nicaise, 2015; Wouters & Douterlungne, 2002). Although the classification by Baert et al. (2006) offers a different lens to look at the challenges of non-traditional students, it seems that the classification of dispositional and situational rather than individual and social context is more attuned to represent these challenges better. For example, classifying them as individual does not tell much, as opposed to dispositional which is more specific and tells where the challenge really is situated, and thus can aid in solution building. Nevertheless, this is not to ignore the fact that the model is detailed on the individual level and clearly brings out the barriers at that level. However, its criticism is that it's not detailed at the institutional level. The attempts at this level have been geared towards the learning activity and not the program or its scheduling. Hence the model concerns itself more with characteristics of the learning activities, such as didactical methods, the content of the study program, the structural and organisational context and the cultural context factors (Boeren et al., 2010). As well, the model has not been widely validated through other studies.

3.3.2 Integrated model

In 2010 another attempt was made to construct another model for supporting adult continuing education. This time the emphasis was on an integrated model of participation in adult education (Boeren et al., 2010). As the authors claimed, their model looked at all the three levels of micro, meso and macro. This Boeren et al. (2010) integrated model was constructed from the Baert et al. (2006) model, hence many of the structures are similar, including the positives and criticisms. However, the Boeren's integrated model did include more involvement at the educational institutional level. Within the integrated model, the central focus of the educational institution is characterized by organisational factors such as the number of staff, accessibility, the quality of the system, the level of development of the support services, the extent to which it attracts marginalized groups, the composition of class groups, didactical methods, and the admission requirements. Both the Baert et al. (2006) and Boeren et al. (2010) integrated models span into the participation sphere of the adult education continuum, hence may have potential to miss the factors influencing struggling non-enrolled students, which is a key population for this current study.

3.4 Decision making theory

3.4.1 Chain of response model

Cross (1981), studied adult participation and developed a model that she called the Chain of Response (COR) model due to the connectedness of its sections. This model was based on a population of non-participating students which was well aligned to enlist the barriers they faced, with much similarity to the current study population of ENs. While this model was consistent with the then thinking on adult education, it went further to detail and classify the factors that influenced adult learners into three, which included institutional (schools), situational (personal, family & work wellness), and dispositional (mental concerns). This elaboration and modelling of the needs of adult learners seeking participation or advancement in education was quite easy to comprehend and went ahead to inform development of programs that targeted them. Cross had earlier opportunities of studying the needs of non-traditional learners and the responses of non-traditional programs; and the relevant stakeholders, which enriched her understanding of this population leading to a

comprehensive elaboration of the forces influencing their participation in advancement education (Cross & Zusman, 1977). This earlier work was foundational to the making of the COR model as it exposed vital areas in the learner and programs from which she identified two of the three facets of the COR model being the ‘personal’ and ‘institutional’ respectively. This earlier work is also much aligned to the current scenario of Ugandan ENs and their need for astutely designed advancement programs. Her model mainly targeted the decision-making process around enrolment into learning and hence exposed the barriers that non-traditional students had to grapple with. Utilisation of her findings and the COR model led to widening of participation in advancement education (Bamdass, 2014). Cross’ COR model started with the individual’s self-perception followed by formation of expectations and concluded with the balancing of opportunities and obstacles leading to the actual decision of participating in the adult learning or not. The model was validated and found to be consistent in explaining the barriers that influenced adults seeking to participate in learning opportunities (Bamdass, 2014; Boeren et al., 2010; Hearne, 2018; Okpara, 1993).

3.4.2 PRiSM-T model

Stein et al. (2011) developed a conceptual model to explain the factors related to the decision to enrol in a workforce development credentialing program. Their model was initially a 4-factor model (Stein, Trinko, & Wanstreet, 2008) that evolved into a five-factor PRISM model. The new addition was the identification of institutional support as a separate factor from the original four. The model was called the PRiSM-T model for predicting enrolment. The other factors were possibilities for intellectual, personal, and career opportunities; institutional support; synchronizing learning and earning; the reflective learner; and match with an academic reputation (Stein et al., 2011). Criticism of the PRiSM-T model is that it used a population that was already enrolled in the program. Also, the response rate was very low at 18% which was 75 respondents out of the 421 contacted.

3.5 Age and stage theories

3.5.1 The seasons of a man's life

Age and stage conceptualization theories also present an opportunity to understand and explain the seasonal transitions that occur in people’s lives, and more so healthcare workers. Particularly the work of Levinson (Levinson, 1978; Levinson, 1986), provides a platform to understand constructs happening in the lives of ENs as they enter and transition

into adult life. Of keen interest is that Levinson's work focused on health workers, hence making it relevant to explain the stages and seasons that ENs would go through. It also provides a clearer understanding of the interplay of the main components; work, family, religion, ethnicity, and friends, as opposed to non-age and stage theories. Levinson studied men and later women and provides vital viewpoints on the life course and the major seasons in the life cycle which are divided into three parts: (a) a starting segment of about 20 years, including childhood and adolescence or pre-adulthood; (b) a period between pre-adulthood and old age, which ranges from 20 years to 65 years, vaguely known as adulthood and (c) a final life segment vaguely called old, starting at around 65 years. The pre-adulthood phase resonates with students who are seeking their first license to the EN cadre. Their demographics are usually aligned to the type of full time, residential education available in Uganda. The adulthood phase is what would fit many of the ENs seeking educational advancement, and due to their demographics, their education needs to be planned differently from the preceding phase. He further discussed the life cycle as a sequence of eras and conceived the idea of overlapping eras to allow for a cross era transition, which generally lasted about five years, terminating the outgoing era and initiating the incoming era. Levinson proposes that the age range from 17-22 years is the end of childhood and people start to think of their independence from parents and guardians. The age range 22-28 years, where most ENs are placed post their first nursing qualification, is usually characterized by moving to a new home, beginning work, forming relationships usually including marriage and children. This is key in understanding how resources are spent in this group, including the prioritization and commitments that come along. For example, many ENs would prioritize work and family over educational advancement, hence making education secondary, (Levinson, 1978; Super, 1976). But just in the preceding season education was a top priority, and yet just one season transition later, the education is deprioritized. Therefore, planning education for ENs who are in the Levinson's age range of 22-28 (and other stages above) cannot be on the same educational advancement framework as for the pre-service category (17-22 years), for whom priorities are different. While age and stage theories offer a considerable explanation that can be used to understand some sections of the EN educational advancement challenge, these theories have their criticisms and shortcomings. For example, Levinson's work is criticized because it mainly involved studying men. Considering that nursing is largely a female dominated profession (Auerbach et al., 2017), using a theory that was constructed on majorly male findings can introduce bias and leave out some salient issues that may predominate in females. Already the earlier work of Super (1957) had

illuminated the psychology of careers and vocational development, reporting differences between men and women. As well, there wasn't sufficient information on how to manage transitions. The subject under this study, which is educational advancement, relates more to a transition, which Levinson does not explain in detail. These and more criticisms are also shared by Bennett (1990). While there has been the general belief that the younger or earlier someone returns to school the better, Trolian, Jach, Hanson, and Pascarella (2016), report contrary findings. For example, they indicated that based on resources accumulation and therefore affordability to undertake educational advancement, older adults were in a better place than young adults. This argument was also underpinned on the need to have children, acquire experience and build professional networks, before advancing.

3.6 Transition

3.6.1 EN to RN transition model

Most recently, Wall et al. (2018) developed a transition model for ENs founded on the transition theory of Schlossberg, Waters, Goodman, and Gullickson (1996). This model is useful to understand the ENs career advancement process; however, it stands at the transition point of the educational advancement continuum, targeting those who are starting a program. It proposes 4 sequential stages of preparing to move in, moving in, moving through and lastly preparing to move out (Wall et al., 2018), which included an additional step to the original transition theory of Schlossberg et al. (1996). The model also viewed the transition process at a macro level and did not provide details of actions needed for the different elements proposed. For example, at the 'preparing to move in' stage, the model highlights 'establishing balance between work, personal and expected study responsibilities' but does not break down what this could entail. Alongside other models, this transition theory can be useful to offer a lens to understand the macro expectations and experiences of RNs who have advanced from the EN role.

3.7 Summary of theories

Although most of the theories tended to provide a list of pertinent areas/factors which influence advancement education, the choice for a theory to guide this study needed one that combines these factors comprehensively to guide the process of decision making. Some of the theories enlisted comprehensive factors influencing a person's return to education highlighting the positive driving forces/motivators/enablers/facilitators and the restraining

forces discouraging/barring the person from seeking advancement education (Baert et al., 2006; Boeren et al., 2010; Cross, 1981; Herzberg, 2005; Miller, 1967; Stein et al., 2011). However, there were also theories that promoted the consideration of singular events (Aslanian & Brickell, 1980). ENs as adults seeking to join advancement education come from a background of already existing commitments and responsibilities, consequently, a theory to guide their decision to enter advancement education needs a multifactorial consideration. Similarly, ENs would need a theory whose development took into consideration the full spectrum of the education advancement journey starting from the time when they struggle to make the decision to enrol, hence addressing relevant issues at this stage. Some theories tended to ignore this component and development of those theories was informed by views of people that were already enrolled into programs (Houle, 1961; Stein et al., 2011; Wall et al., 2018). Further, some of the theories were also developed from research with small population samples and this could limit their generalizability (Houle, 1961; Stein et al., 2011). Although all the above were useful as potential theories to guide this study, the COR model (Cross, 1981) stood out as it had been widely validated, considered a decision based on a wide array of factors, had been utilised to support nurses and other vocational populations, recognised the aspect of challenges which people not enrolled in programs struggled with (Bamdass, 2014; Cross & Zusman, 1977; Cross, 1981; Lavrijsen & Nicaise, 2015; Melrose, 2014; Murphy et al., 2006; Okpara, 1993; Smith, 2013).

On the next page is a summary of potential models from which one was selected to guide this study. The table 19 summarizes the theories in four segments highlighting their category; name of theory/model; key theory propositions; and lastly their criticism.

Table 19: Summary of theories and models

#	Category	Theory/model	Key theory proposals	Criticism
1.	Motivation	Houle (1961) Goal-oriented motivation theory	<ul style="list-style-type: none"> • Involvement in adult learning activities was encouraged by goal-oriented, activity-oriented or student-oriented motivation. • The higher the formal education of the adult, the more likely it was for them to continue building on their education. • The lower the person’s formal education, the weaker their support structures and connections to foster and encourage continuing education. • Factors influencing a person’s return to education included family background, teachers and schools, public libraries, occupations, and the examples of friends. 	<ul style="list-style-type: none"> • Influence of public libraries, teachers (in a student centered era), and friends may have changed over the years. • Theory was generated from only 22 interviews, which was not considered representative. • Participants were already enrolled into an adult education program, their capacity to enlist challenges of non-enrolled participants may be limited.
2.	Motivation	Miller (1967) push-pull theory	<ul style="list-style-type: none"> • Positive driving forces encourage an adult toward participation in higher education while negative, restraining factors discourage the person. • Adult participation depended on the degree of congruence or conflict between the persons’ needs and the apparent energies. • He suggested that survival, safety and belonging needs must be met first before an adult thought of other needs up the hierarchy. • Types of adult education classes include vocational competence; personal and family competence; citizenship competence; and self-development 	<ul style="list-style-type: none"> • Utilized limited research findings. • Used socio-economic classes in explaining access to vocational education. This may have limited use in today’s world, especially Uganda. • Factors in subcategories may be interchangeable, hence the sub-classification for the groups may not hold much meaning in describing characteristics of the group.

3.	Motivation	Catalano (1985) motivation-retention model	<ul style="list-style-type: none"> Emphasises the non-academic features of a person's life, especially emphasizing opportunity cost. Advancement decision was not reached in isolation but considered in twining with other related factors. Highlighted the opportunity cost of school fees, books, supplies, foregone earnings, time spent studying, disconnection with social activities, effort expended in planning and pursuing the advancement education, and the time it would take to get another job. 	<ul style="list-style-type: none"> Model has neither been published in accessible ways nor validated.
4.	Motivation	Aslanian and Brickell (1980) Triggers and transition theory of motivation	<ul style="list-style-type: none"> Triggers: significant life changes such as career, family, health, religion, or leisure opportunities. Returning to school is a consequence of changes (triggers) an adult's life. Triggers result from a past, present or future significant change. Triggers are divided into employment, family, and individual growth spheres. 	<ul style="list-style-type: none"> Literature furthers this claim away from a single event or reason and suggests that the actual decision is influenced by many factors. The model used a general public population who may not necessarily have had the desire to pursue advancement education.
5.	Motivation	Hertzberg's Hygiene and Motivational Factors Theory, (Herzberg, 1971)	<ul style="list-style-type: none"> The hygiene factors are working conditions, policies and administrative practices, salary and benefits, supervision, status, job security, co-workers, and personal life. The Motivating factors are recognition, achievement, advancement, growth, responsibility, and job challenges. Hygiene factors must be present in the work before motivators can be used to stimulate the performance of an employee 	<ul style="list-style-type: none"> Was constructed mainly for the working environment. Applying it outside the work environment might be a struggle. Its development was informed by a study limited to engineers and accountants. May have limited generalizability to other fields such as healthcare and education.

6.	Widening participation and integrated models	Baert, De Rick, and Van Valckenborgh (2006). Conceptualizing of the learning climate	<ul style="list-style-type: none"> • More recent and tends to include several factors considered by earlier models within the sector of adult learning. • Constructed from findings of their study that looked at ways of promoting a positive learning climate. • Appreciates that participation in continuing education for adults is complex and involves many facets of life • Attempts to bring the key facets involved at different levels and these are the individual level, educational institutions level and the social context level 	<ul style="list-style-type: none"> • Not detailed at the institutional level. • Has not been widely validated
7.	Widening participation and integrated models	Boeren et al. (2010) integrated model	<ul style="list-style-type: none"> • Looked at all the three levels of micro, meso and macro. • Was constructed from the work of Baert et al. (2006) model 	<ul style="list-style-type: none"> • Shares the criticisms of Baert et al. (2006). • Did include more involvement at the educational institutional level
8.	Decision making	Patricia K. Cross Chain-Of-Response (COR) model	<ul style="list-style-type: none"> • Explored barriers to non-participation • Model was informed by earlier vital work on the needs of non-traditional learners and the responses of non-traditional programs. • Built on the work of Johnstone and Rivera (1965). • Is widely validated and accepted as a relevant theory in explaining the needs and barriers of non-traditional students. • Model is divided into three major sections with clear transitional steps. • Organized from inside (the individual) to outside (the external factors). 	<ul style="list-style-type: none"> • Initial development did not consider non-formal education. • Initial development used a western population and did not include diverse ethnic populations.

			<ul style="list-style-type: none"> • The model was consistent with the already known evidence that participation in learning was not singly informed but was as a result of a chain of responses. • Model raises barriers that ENs and others in low-resource environments struggle with in making decisions regarding educational advancement. • Shows forces leading adult learners toward and/or away from participation in educational advancement. • Presented the changes and challenges that could influence an adult learner and these included demography, technology, and social attitudes. • Proposed an integrated approach to advancement education that promotes continued advancement at different phases of a person’s lifetime, rather than a linear approach. • COR classification of barriers into categories and sub-classifications within each of the categories was validated and found consistent. 	
9.	Decision making	Stein et al. (2011) PRiSM-T model	<ul style="list-style-type: none"> • Explains the factors related to the decision to enrol in a program, • Provides five factors which are 1- Possibilities for intellectual, Personal, and career opportunities; 2-Synchronizing learning and earning; 3-The reflective learner; 4- match with an academic reputation; and 4-Institutional Support 	<ul style="list-style-type: none"> • Used a population that was already enrolled in the program. • The response rate was very low at 18%.
10	Age and stage	Levinson (Levinson, 1978;	<ul style="list-style-type: none"> • Focused on health workers. • Provides a clearer understanding of the interplay of the main components; work, family, religion, ethnicity, and friends. • Studied men and later women 	<ul style="list-style-type: none"> • Development mainly involved studying men. The work in women came in later. Considering that nursing is largely a female

		Levinson, 1986) The seasons of a man's life	<ul style="list-style-type: none"> • Provides vital viewpoints on the life course and the major seasons in the life cycle which are divided it into three parts: (a) an initial segment of about 20 years, including childhood and adolescence (pre-adulthood); (b) a final segment starting at around 65 (old age); and (c) between these segments, an amorphous time vaguely known as adulthood. • Conceived the life cycle as a sequence of eras. • Conceived the idea of overlapping of eras to allow for a cross era transition, which generally lasts about five years, terminating the outgoing era and initiating the next. 	<p>dominated profession, using a theory that was constructed on majorly male findings can introduce bias and leave out some salient issues that may predominate in females.</p> <ul style="list-style-type: none"> • There wasn't sufficient information on how to manage transitions, where the main issue for this study lay, especially in view that educational advancement is a transition.
11	Transition	Wall, Fetherston, and Browne. EN to RN Transition Model	<p>Proposes 4 sequential stages of preparing to move in, moving in, moving through and lastly preparing to move out. Viewed the transition process at a macro level</p>	<ul style="list-style-type: none"> • Did not provide details of actions needed for the different elements proposed.

3.8 Model for this study

3.8.1 Background to the Cross' Chain-of-Response (COR) model

With the lens on the educational advancement and its continuum for adult learners, the seminal work of Cross (1981) which explored barriers to non-participation and produced a model, was a good fit for this study. The background, initial thoughts and work on this model started as a consultancy jointly pursued by the USA Centre for Research and Development in Higher Education at Berkeley and the National Institute of Education. They were interested to plan an evaluation of non-traditional degree programs. However, they ended up doing three mini projects, two of which are relevant for this study. The two relevant projects were, the needs of non-traditional learners and the responses of non-traditional programs; and identification of decision makers concerned with non-traditional degree programs and an analysis of their information needs (Cross & Zusman, 1977). The consideration of non-traditional students, their needs, suiting non-traditional programs and the identification of relevant decision makers concerned with non-traditional programs reflects the aims of this study. Following this 1977 study, Cross developed her thoughts and ideas on adults as learners and increasing their participation in learning through the construction of a theoretical model called Cross' Chain of Response (COR) (Cross, 1981).

The history of the COR model components-classification began with Johnstone and Rivera (1965) who proposed that barriers for non-traditional students could be categorized into two as situational, which meant external to an individual's control; and dispositional, based on personal attitude. This classification was followed up by Carp, Peterson, and Roelfs (1974), who studied the learning activities of non-traditional students already engaged in learning. Although they didn't classify barriers (Johnstone and Rivera (1965) and did not utilise a population locked out of advancement, which in this study is referred to as a non-enrolled population. Nonetheless, they ranked the barriers in order of importance as cost; not enough time; not wanting to attend school full-time; home responsibilities; job responsibilities; and the amount of time required to finish the program. Later, Cross (1981), added the concept of Institutional barriers to the situational, and dispositional concepts (Johnstone and Rivera (1965); and developed the COR model. Further work continued to identify and classify reasons why non-traditional students were challenged. Scanlan and Darkenwald (1984) re-categorized the concepts (barriers) into six

categories and these were: individual, family, home-related problems; cost concerns; questionable worth or relevance of educational opportunities; negative perceptions of the value of education; lack of motivation or indifference to learning; and lack of self-confidence. Manning and Vickery (2000) also attempted to classify the barriers into six and these were: personal disengagement; lack of program quality; work constraints; cost; family constraints; and professional disengagement. These seemed to duplicate some factors. For example, in the case of Manning and Vickery (2000), the deterrent number one (personal disengagement) and number six (professional disengagement) could have been combined. Although the classification of Cross was older, it remains robust, simple to understand and easily applicable to the situation of ENs in Uganda.

3.8.2 Explanation of the (COR) model

Cross' Chain-of-Response (COR) model is divided into three major sections that are represented by seven steps or stages. These are self-evaluation, attitudes about education, the importance of goals and the expectations that these will be met, life transitions, opportunities and barriers, information on educational opportunities, and the decision to participate. It was organized in a way that starts with the individual and finishes with external factors. It was named the chain of response model because of the links or connections from one step to the next, much the same way as a chain (Wall et al., 2018). The happenings/developments at each step also influenced whether there was going to be a transition to the next step or not. The more positivity that learners experience at each stage, the more likely they would proceed to the next.

This COR model exposes barriers to participation that affect a candidate from the inability to participate side of the continuum. Participation in learning activities was seen more realistically as a result of a chain of responses (Catalano, 1985), rather than a single act (Aslanian & Brickell, 1980). Cross' proposal to view influencers of participation in a broader sense was seen as a more realistic explanation of the choices made by learners or prospective students (Knutsen, 2011; Malhotra et al., 2007; Smith, 2013; Valentine & Darkenwald, 1990). The COR model continuum began with self-evaluation and attitudes about education and continued through the importance of goals, life transitions, opportunities and barriers, and information culminating in participation. Cross (1981) studied why students were unable to participate in learning activities, similarly this study is looking at why ENs are unable to participate in

educational advancement programs. This research shares a similar notion of ‘non-participation’ to that of Cross, even though they looked at different standpoints of non-participation, the COR model provides a useful theoretical framework a lens with which to view the of EN educational advancement.

3.8.3 Categories of the COR model

Cross (1981) COR model is a participation barrier-based model that classified barriers to participation in three categories: situational, institutional, and dispositional. This classification has also been adapted and used by several researchers (Baert, 2003; Wouters & Douterlungne, 2002). The first category which is ‘Situational’ barriers relates to a person’s circumstances that arise in everyday life. These may include one’s situation in life, such as family, work, poverty, adult identity, cultural issues, and learning tracks. Looking at the lives of ENs, many of these seem relevant. For many ENs, their situational barriers may involve connections with family, work, and resource limitations (Table 20).

The second category refers to ‘Institutional’ barriers as those put in place by the education system, institutions, and providers. These include processes that eliminate or discourage occupied adults from participating in educational activities, such as inconvenient schedules or locations, inflexible school fees, and inappropriate course offerings. Particularly and of interest is the need for convenient scheduling which some scholars propose as critical (Baert, 2003; Wouters & Douterlungne, 2002). Considering that the majority of EN educational advancement programs are fulltime and residential, these align well to the description of Cross’ institutional barriers.

The third and last category refers to ‘Dispositional’ barriers which are those attitudes, perceptions, and expectations that prevent people from undertaking to learn. These include an individual’s negative attitudes and perceptions about returning to school that limit their success. Using the current evidence from Chapter two the concepts that may influence ENs desire, motivations and ability to advance are captured in Table 20.

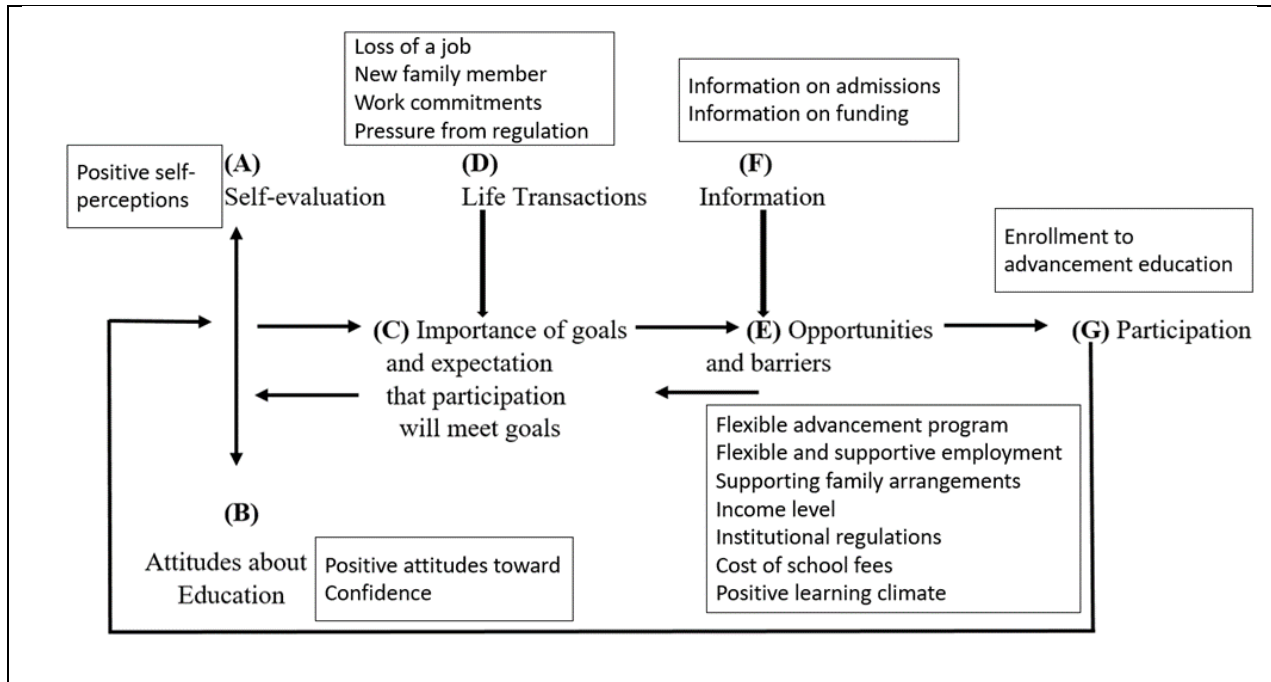
Table 20: Combined summary of concepts that may influence ENs desire, motivation, and ability to advance.

<p>Dispositional</p> <ul style="list-style-type: none"> • Attitudes • Self esteem • Motives • Confidence in one’s abilities • Perceived Barriers • Satisfaction with status quo • Past education experiences • Value for education • Hope for better salary and benefits • Job insecurity • Opportunity for promotion • Ease of getting new jobs • Pressure from job 	<p>Institutional</p> <ul style="list-style-type: none"> • Program design or Flexibility of programme • Modular versus linear structure • Accessible place • Class size • Didactics methods or teaching approaches • Availability of preparational programme • Theoretical versus vocational education • Admission requirements and conditions • Accreditation of Prior Learning (APL) leading to exemptions • Institutional regulations • Teachers’ attitudes and approaches in leaning • Admission fees • Cost of school fees • Books • Supplies • Foregone earnings • Time spent studying • Disconnection with social activities • Effort expended in planning and pursuing the advancement education • Time it would take to get another job. • Positive learning climate • Collaboration with student employers • alternative study methods • financial aid • Internet access
<p>Situational</p> <ul style="list-style-type: none"> • Employment status • Income level • Gender • Age • Ethnicity • Educational attainment of parents • Employer level of support • Family commitments • Reference group Services • Childcare • Household duties • Giving birth • Job loss • Civil status 	

3.8.4 The COR model

Cross presents the three categories in a sequential flow using seven factors that influence participation (or non-participation) and shows the relationships between them. In a diagrammatic model with sequential flow of the seven steps, Cross uses alphabetic letters ABCDEFG and their descriptors to explain the model, as shown in Figure 4.

Figure 4: Chain of Response Model



(Source: Cross 1981, p. 124)

This COR model proposes that persons must first possess positive self-perceptions (A) and attitudes towards education and learning (B), to progress to (C) and appreciate the importance of goals and expectation that participation will meet goals. In this case, ENs must perceive that they are able to learn, have the confidence to do so and believe that learning is a positive experience. Attitudes and perceptions are influenced by previous experiences in learning, peers, and norms which form the dispositional barriers. Life transitions (D), for example, ‘critical incidents’ such as a loss of a job or a new family member, also impact on goals often changing their importance and bringing new ones to the forefront. This contributes to the situational barriers relating to a person’s circumstances and arising from everyday life. They could arise from one’s family life (responsibilities and commitments), work, resource limitations, and cultural issues. In the case of an EN in Uganda, these barriers could include challenges with

employment, low income, advanced age, lack of employer support, family commitments and dynamics, among others. The more important an individual perceives the goal to be, the more likely they will seek opportunities and overcome barriers in order to achieve it (E). This means that even though barriers may exist, ENs will attempt to overcome them if they perceive educational advancement as important and have the right facilitators. If they do not highly value a goal or expect that participation will help them achieve it, then they are likely to be discouraged from participation by a lack of opportunities and barriers to learning. However, institutional barriers such as the education system can make educational advancement difficult. So perceived barriers to EN educational advancement can hinder their involvement in professional development. Lack of information (F) on learning and funding opportunities may make barriers seem insurmountable. While the access to relevant information can enhance chances to participate in learning (G). The likelihood of participation increases with the number of positive responses along the chain. If ENs positively perceive themselves, develop positive attitudes towards educational advancement, have the supporting employers, access funding and appropriate study program, then they will seek admission and get enrolled to pursue educational advancement. The model is reciprocal in that participation in learning will in turn influence self-perceptions and attitudes towards education and can trigger another cycle. The COR model raises key concerns that ENs and others in low-resource environments struggle with in making decisions regarding educational advancement. These include confidence in one's abilities, past education experiences, challenges at work, family commitments, lack of flexible advancement programmes, admission requirements, conditions, and costs, among others.

The COR model was designed to show interactions among the forces leading adult learners toward and/or away from participation in adult education. Hence, the COR model is suitable to guide this study as its concepts are well aligned to the perceived influencers of EN educational advancement. Therefore, this study will be guided by the COR model to explore experiences, aspirations, needs, barriers, and facilitators for EN educational advancement. The COR model will be useful to understand the major influencers of EN educational advancement. With this clear view, it should be possible to design effective solutions targeting ENs. The researcher will package the solutions in logical model elements, hence producing a new educational advancement framework for Uganda. The framework should be useful in similar low resource environments and other vocational programs.

Examining models to widen access to higher education the COR model remains relevant today; particularly for individuals wanting to receive higher education and institutions wanting to provide higher education(Bamdas (2014). Various scholars have continued to study and apply the COR model leading to its better understanding, (Hearne, 2018; Melrose, 2014; Okpara, 1993; Sheth, 2001). Analysis of the COR model components such as situational barriers have been validated across various independent studies (Atkin, Rose, & Shier, 2005; Stuart, Cook, Cutter, & Winterton, 2010) to inform developments of new possibilities into higher education (Bamdass, 2014). Through the COR model application, subcategories have been exemplified by expanding to include the cost of training, location of training, childcare, lack of time for school, lack of support, and lack of time to make progress, all of which may relate to current Ugandan ENs seeking educational advancement (Atkin et al., 2005; Stuart et al., 2010). Institutional barrier exemplars have been expanded to include the following.

- *Accessing Course Information:* Learners sometimes have difficulty accessing information about courses or are not aware of courses available to them, or when the courses will be run (academic cycle).
- *Limited Provision:* Learners may be deterred from institutions that offer limited spaces for course offerings. Learners can also be deterred by the level of institutional equipping and readiness for the program.
- *Assessment Styles:* Depending on how assessments are conducted, they can also be a discouraging factor for adult learners.
- *Inconvenient Class Times:* Course placement and scheduling can also be a barrier. The time of day or the day of the week when classes are held can also affect participation. When courses are not flexible enough, they fail to attract the working class, such as ENs.
- *Funding:* Non-availability of funding arrangements can be a serious concern to adult learners. In the case of ENs whose income is low, funding for their educational advancement is key. As well, the lack of flexibility in tuition fees payment can affect enrolment, (Melrose, 2014).

3.8.5 Validation of the COR model

The COR model makes a strong contribution to understanding the concepts of educational advancement for non-traditional students (Bamdass, 2014; Lavrijsen & Nicaise, 2015;

Merriam, 1993). The classification of barriers as situational, institutional and dispositional appear valid and the sub-classifications within each of the category reliable over time and relevant to this study (Bamdass, 2014; Malhotra et al., 2007). Merriam (1993) found it relevant in addressing variables such as expectations, barriers, motivation attitudes, skills, goals, self-identity, when studying adult learners. It has been widely used, validated, and accepted as one of the richest models to explain the issue of non-traditional students and their quest for educational advancement, (Bamdass, 2014; Hearne, 2018; Lavrijsen & Nicaise, 2015; Okpara, 1993). While its initial development had targeted enrolled students participation in learning activities, it was later expanded to include students seeking to enrol in adult learning programs (Melrose, 2014).

Rather than just proposing a model, Cross studied and discussed the changes and challenges that would affect an adult learner, such as demography, technology, and social attitudes; many of them could be applicable in Uganda's ENs context. Instead of pursuing the most common linear life-plan for education of her time, she deferred and proposed a more workable integrated approach that would suit non-traditional learners; and that may suit ENs in low resource environments such as in Uganda (Bamdass, 2014; Connell, 2008; Merriam, 1993). This would allow and promote continued advancement at different phases of a person's lifetime. Scholars of her time and those who have used this model continue to agree that her COR model was excellent in explaining and guiding future work in the educational advancement of non-traditional students (Aslanian, 1983; Bamdass, 2014; Connell, 2008; Smith, 2013; Wall et al., 2018). Most recent reviews of theoretical models of participation in adult education also found the COR model quite comprehensive and astute (Bamdass, 2014; Boeren et al., 2010).

3.8.6 Criticism of the COR model

The COR model has also received criticism, suggesting the model does not consider non-formal education and the very poor (Ginsberg and Wlodkowski (2010). Some of the criticism appears valid, although it does not affect the model's usefulness for this study, since the main population studied is formally trained ENs. Some suggest that the COR model was undeveloped, having utilized a western population and not included different ethnic populations during the initial development (Ross-Gordon, 1991; Smith, 2013). However, since 1981 the COR model has undergone validation with ethnic populations including non-western populations, and across various professions including nursing, although the examination of the model in this study

context will add theoretical knowledge of its application to Sub-Saharan African populations. Further criticism has been targeted at Cross' concept of self. The argument here is that the notion of self is more western and may not be understood in the same contextual way or have the same weight in other non-western societies, especially those that tend to be more family and society or community oriented, (Geertz, 2008; Shweder, Le Vine, & LeVine, 1984), indeed there may be variances (Hollan, 1992). Although there is agreement on the varied understanding of the self-concept across cultures, the caution is to look deeper than the statement. Certainly, much of Sub-Saharan Africa and Uganda tend to be aligned to this observation, with persons being more family-centric and community-centric than self-centric. To overcome this and explore further for this study, the data collection process for this study was designed to pick information relevant to ENs at self, family, and community levels. The most recent criticism of the COR model is that some of Cross' classifications are in some ways artificial and fluid (Lavrijsen & Nicaise, 2015). They question why a barrier such as 'having no time because of family duties' was labelled as a situational barrier, yet in their opinion, could just as well be regarded as the result of a specific institutional arrangement, such as the unavailability of affordable childcare. They also question why being confronted with high enrolment fees was labelled as an institutional practice, yet in their opinion, this could be categorized as situational, (economic disadvantage that one lives in) (Lavrijsen & Nicaise, 2015). Dispositional barriers could also be affected by institutional arrangements, such as the design of the educational system.

While these criticisms were acknowledged, other evidence supported Cross' classification of the barriers to participation and found them consistent and astute, (Baert et al., 2006; Wouters & Douterlungne, 2002). Nevertheless, some sub-classifications overlap each other, barriers classified as situational may also be reflected in the dispositional category, and vice versa. Barriers in the dispositional or situational category may as well be found in the institutional category. While this may be true and could cause some tensions when analysing the findings into overlapping categories, it does not change the potential usefulness of Cross' COR model, to guide this study. Despite differences of opinion on some categorization criticism, the COR model makes a strong contribution to understanding the concepts of educational advancement for non-traditional students and was still relevant in guiding studies involving adults seeking educational advancement.

3.9 Chapter summary

This chapter has provided an account of the major work in the field of adult non-traditional learners including the influential theories and models that have informed the sector. A summary of key concepts to consider when planning educational advancement for non-traditional students such as the ENs were explored. Using the COR (Cross 1981) the three core categories which will inform and guide the research study data were the Dispositional; Situational; and Institutional.

Theories and models developed considering populations that were not enrolled in educational advancement provided a wider understanding and have for many years informed the development of well synchronised and responsive educational advancement programs, vital in supporting populations that felt locked out of education. Cross' Chain-of-Response (COR) model has been selected to use as a lens for this study not only to guide the categorisation and data findings but also to explore how this theory fits the context of SSA and the African population with respect to the interplay of the self, family and community. The foundations of this model are strong and reliable especially relating to its comprehensive view of educational advancement among non-traditional students. The next chapter presents details of the methods for this study.

Chapter 4: Research Methodology

4.1 Introduction

Chapter four provides the implementation plan for the study; a three-phase mixed methods design using Focus Groups Discussions (FGDs), survey, and individual interviews. Information is provided on processes and tools including details on how data was collected across the three phases. The COR model selected for the study underpins both the data collection, analysis and generation of new knowledge.

The mixed methods approach is a pragmatic methodology that embraces and builds on the strengths of both the constructivism and positivism paradigms (Ngulube, 2015; Subedi, 2016). Combining the strengths of qualitative and quantitative designs to produce comprehensive research evidence (N Romm & P Ngulube, 2015; Schoonenboom & Johnson, 2017) to understand and explain the complex and multifaceted nature of EN educational advancement (Fetters, Curry, & Creswell, 2013). The ethical issues and challenges of the research are discussed, and an analytical plan described, with qualitative data generating deep and detailed meaning and quantitative methods targeting the wider population to confirm findings and increase the representative EN study sample. The study progressed by addressing the following aim, objectives and research questions to strengthen educational advancement for ENs, consequently generating evidence to make change and move nursing forward in Uganda.

4.1.1 Study aim and objectives

The aim was to generate an evidence base to inform a new educational framework for Uganda to improve access to education for ENs seeking to advance their career.

4.1.1.1 Objectives

1. Explore experiences, aspirations and needs of ENs in Uganda with respect to advancing their nursing education.
2. Identify the barriers and facilitators for educational advancement of ENs in Uganda.
3. Examine the suitability of Ugandan EN advancement programs in meeting EN education needs.
4. Using research findings generate a new educational framework on which Ugandan nursing institutions can build appropriate and accessible EN advancement programs.

4.1.1.2 Research questions

1. What are the experiences, aspirations and needs of ENs in Uganda with respect to advancing their nursing careers?
2. What are the barriers and facilitators for academic advancement of ENs in Uganda?
3. How suitable are the current Ugandan EN advancement programs in meeting EN education needs?
4. What is an appropriate academic advancement framework for ENs in Uganda?

4.2 Philosophical paradigm

The approach to address the issue of generating strategies that could strengthen educational advancement need an interaction from multiple sources. The pluralistic/pragmatic paradigm of mixed methods research takes into account the various ontological, epistemological and axiological orientations which guide inquiry into a balanced reporting of views on the nature of reality (Creswell, 2014; Ngulube, 2015). Consequently, this needed to take advantage of both quantitative and qualitative methods. The scientifically accepted way to do this was by going through the pluralistic/pragmatic paradigm and its mixed methods methodology. Educational advancement is a highly connected and intertwined dimension that assessing it with one philosophical orientation is prone to miss out key realities and their connectedness. However, given the wide view of the pluralistic/pragmatic paradigm and its mixed methods, it was possible to organise a study that collected views from various angles and provide a more complete understanding of the phenomenon (Creswell, 2014; Haines, 2011; Schoonenboom & Johnson, 2017; Teddlie & Tashakkori, 2012). This approach made it possible to use different methods and data sources to collect rich, detailed, and representative data that allowed the examination of the same phenomenon from various lenses. Further the pluralistic pragmatic paradigm allows the possibility to validate results obtained with other methods, consequently providing an opportunity to fully understand a phenomenon under inquiry (Creswell, 2014; N Romm & P Ngulube, 2015). With the limited singular view of both realism/positivism and constructivism/interpretivism, it was necessary to utilise a philosophical orientation that provided a more comprehensive approach to inquiry (Creswell & Creswell, 2017; Ngulube, 2015). Further, the pragmatic philosophical orientation through its mixed methods approach combines

the strengths of the interpretivism qualitative methods and positivism quantitative methods, hence ascertaining both depth and generalizability (Haines, 2011; Lund, 2012; Schoonenboom & Johnson, 2017; Teddlie & Tashakkori, 2012). Therefore, with the richness of the pluralistic pragmatic paradigm, it was found relevant and most suited philosophical orientation to guide this study.

4.3 Choice of methodology

Since the philosophical orientation was already set to the pluralistic/pragmatic approach, the choice of design was also set within the boundaries of the mixed methods designs. While the mixed methods are an agile approach, they are limited to four primary designs including explanatory sequential, exploratory sequential, embedded, and the multiphase design (Creswell, 2014; Creswell & Creswell, 2017; Curry & Nunez-Smith, 2014; Ngulube, 2015; N Romm & P Ngulube, 2015; Schoonenboom & Johnson, 2017; Subedi, 2016; Teddlie & Tashakkori, 2012). Although scholars have coined additional two designs, the transformative and convergent designs, both are only derivatives of the explanatory sequential and exploratory sequential, with slight differences in arrangement (Creswell, 2014; N Romm & P Ngulube, 2015; Subedi, 2016). Since each phase was going to inform the subsequent one, this study needed to employ multiple methods in a sequential structure, hence a sequentially arranged design was desired. Consequently, this eliminated the embedded design as it was a concurrent arrangement, even though it could handle more than two rounds of data collection. Further, as the study was going to employ three rounds of primary data collection from two heterogenous populations, both the explanatory sequential and exploratory sequential could not handle the three rounds of data collection. Therefore, the multiphase became the choice method as it could handle three or more methods and allowing a sequential arrangement (Haines, 2011; Ngulube, 2015; N Romm & P Ngulube, 2015; Subedi, 2016).

4.4 Organisation of the mixed methods

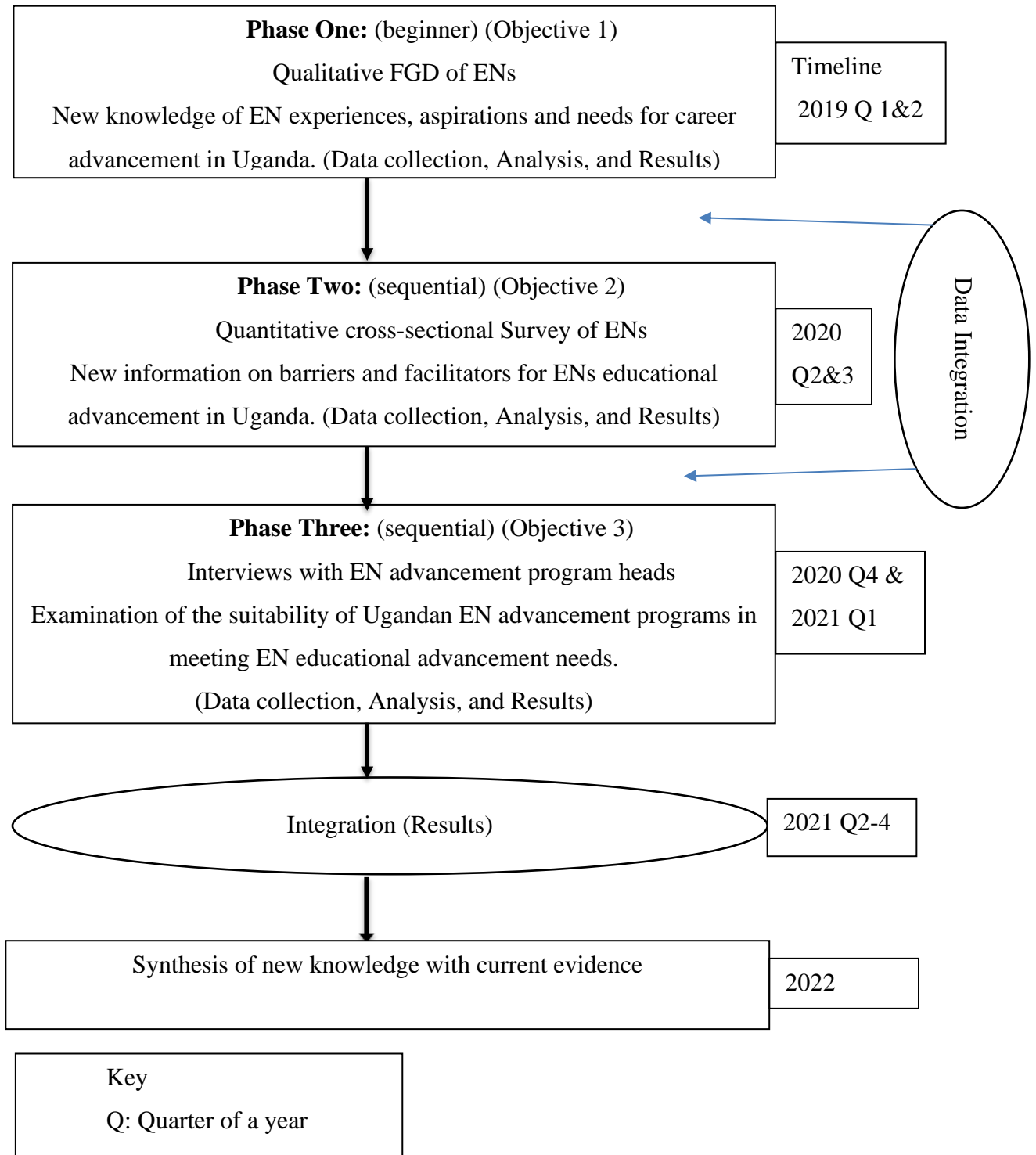
The overall aim of this thesis was to generate strategies that strengthen educational advancement of ENs' through a new program framework, using a mixed methods multiphase design (Creswell, Klassen, Plano Clark, & Smith, 2011; Lund, 2012; N Romm & Patrick Ngulube, 2015; Schoonenboom & Johnson, 2017; Subedi, 2016). Three sequential phases were

developed, each targeted different types of participants using a variety of data collection methods to elicit new knowledge and deeper understanding of the context of ENs in Uganda (Creswell, 2014; Creswell & Creswell, 2017; Creswell et al., 2011; Curry & Nunez-Smith, 2014; Haines, 2011; Schoonenboom & Johnson, 2017; Subedi, 2016) (Figure 5).

The multiphase design, through an iteration of connected sequential qualitative and quantitative studies examined and answered a set of incremental questions/objectives that addressed an overall pragmatic aim, to strengthen educational advancement for ENs (Creswell & Plano Clark, 2011; N Romm & Patrick Ngulube, 2015). The multiphase mixed methods design was selected for its strength in allowing multiple stages of data collection (three or more stages) which makes it possible to handle complex questions such as the one of EN advancement which required multiple levels of data collection from different set of participants (Creswell & Creswell, 2017; Creswell & Plano Clark, 2011; Fetters et al., 2013; Haines, 2011; Plano Clark, 2019; N Romm & P Ngulube, 2015; Schoonenboom & Johnson, 2017). At the analysis and integration level, it provided an alternate opportunity to view responses with multidimensional lens informed by the COR model (Cross 1981), to generate a deeper understanding of EN advancement (Fetters et al., 2013; Lund, 2012).

This project started with phase one which was a qualitative focus group (FGD) design (Breen, 2006; Carey & Asbury, 2016; Freitas, Oliveira, Jenkins, & Popjoy, 1998; Nagle & Williams, 2013; Stalmeijer, McNaughton, & Van Mook, 2014). This used FGDs to explore the experiences, aspirations and needs of ENs with respect to advancing their nursing careers in Uganda. This FGD method was selected for its appropriateness in working with multiple stakeholders on complex concepts (Gerrish & Lathlean, 2015) and its elaborateness in handling emerging issues in real time while going deep to generate rich data (Carey & Asbury, 2016; Janghorban, Roudsari, & Taghipour, 2014). In the past, studies of EN conversion that used non qualitative methods did not elicit consistent results (Webb, 1999). For example, high demand for advancement was reported, yet the ENs did not take up opportunities when these were provided, suggesting additional barriers existed (Webb, 1999). In a follow up study, Webb (2001) found that the qualitative focus group discussion was a better design as more revealing and relevant responses were elicited, which informed the choice of using this method in phase one study. FGDs were used to collect rich and detailed data, to explore experiences, aspirations and needs of ENs with respect to advancing their nursing careers.

Figure 5: Progression of study phases



This was sequentially followed by phase two which was a quantitative cross-sectional survey of the barriers and facilitators of EN educational advancement in Uganda. Survey design was selected for its suitability with providing numeric description of attitudes or opinions of a population. Survey design has been known to be a useful and legitimate approach to research that describes and explores variables and constructs of interest (Ponto, 2015). It allows for quick and cost-effective data gathering from a large target population at one point in time (Creswell, 2014). This phase using a survey explored the opinions of many ENs, not seeking to establish causal relationships, but associations, with possible generalization; hence the limitations of the design do not therefore apply.

This was followed by phase three, which was qualitative interviews to examine the suitability of EN advancement programs in meeting the education needs of ENs. The interviewees were heads of EN advancement programs, usually called principals, drawn from different Schools of Nursing that have EN advancement programs. There are a total of 41 nursing schools offering the EN advancement program in the whole country. Consequently, there were 41 principals from whom to select. Given the need to align the programs to the areas where the FGDs took place, and as indicated in the selection criteria, their selection followed this alignment. The final count was guided by saturation, which was reached by the ninth interview, when no new data emerged. Evidence shows that six to seven interviews are sufficient to capture most of the themes and reach 80% saturation of data in a homogenous sample (Constantinou, Georgiou, & Perdikogianni, 2017; Guest, Bunce, & Johnson, 2006; Guest, Namey, & Chen, 2020). It has also been known that 11-12 interviews are sufficient to reach higher levels of saturation (Guest et al., 2020). The usefulness of the sequential arrangement was that the results of each phase provided grounding for the subsequent one (Creswell, 2014; Schoonenboom & Johnson, 2017). Phase one provided useful information to improve the tool for the survey in phase two. Both phase one and two results informed improvement of the interview guide for phase three. Since phase three was to examine the suitability of Ugandan EN advancement programs in meeting EN education needs, it was necessary that the experiences, aspirations, needs; barriers and facilitators are known prior to it, hence the sequential design.

The results of these three phases were combined to generate rich data that informed the development of a new educational advancement framework, through model elements. Although the study design was complex and potentially resource intensive (Lund, 2012), its strength lies in

the research phases being multifaceted and sequential, enabling the weaving together of different perspectives that inform the intricacy of the study topic (Creswell & Plano Clark, 2011). The organisation of the phases is such that each preceding phase makes ground for the next one as shown in Figure 5. The criticism of multiphase design being resource intensive was solved by seeking funding. Fortunately, the Aga Khan University Research Council (AKURC) was able to fund the study to a tune of USD 10,520.

4.5 Study area

For phase one, the study area formed the four regions of the country, represented by purposively selected districts. The choice of districts took into consideration inclusion of urban, semi urban and rural settings to be able to capture diverse perspectives in understanding the ENs experiences aspirations and needs. This resulted into the districts being Kabale in west, Oyam in the north, Jinja in the east and Wakiso in the centre.

The cross-sectional survey in phase two was constructed to consider taking on ENs from all parts of the country. The population was more important for selection than the place. The population targeted was ENs who had not embarked on the EN-RN educational advancement journey. So, anywhere they practiced or wherever they could be found within Uganda was considered. Permission was granted to identify ENs through the professional regulator database and participants were contacted directly.

Phase three which was individual interviews considered principals purposively selected from schools in the very districts that had the FGDs. If the FGD districts did not have a nursing school that provided EN educational advancement, then neighbouring ones would be considered. Other factors considered were availability of an EN advancement program and school ownership; so as to capture maximum exploration of the input from advancement institution leads. Hence the choice of school leads included those from schools owned by gov't, NGOs and private entrepreneurs; schools from urban, semi urban and rural settings so as to capture diverse perspectives.

4.6 Sampling

Phase one and three used purposive sampling. Purposive sampling was selected for its strength in identification and selection of information-rich cases related to the phenomenon of interest (Moser & Korstjens, 2018; Palinkas et al., 2015). Homogeneous samples were identified on the basis of particular characteristics which enabled detailed exploration and understanding of the EN advancement aspirations, experiences and needs, (Ritchie, Lewis, Nicholls, & Ormston, 2013). Purposeful sampling can be classified into various strategies (Merriam & Tisdell, 2015). This study used Criterion sampling strategy for its characteristic to ensure that all cases selected meet some predetermined criterion of importance (Moser & Korstjens, 2018; Suri, 2011). The criterion for phase one was related to being an EN who hadn't advanced to RN and not in school, yet eligible. In phase three the criterion was related to heading an EN advancement program, at a school located in the district where the FGD took place. If the district where the FGD took place had no nursing school with an EN advancement program, then a neighbouring district was considered. The rationale for this was to relate the discussions in the principals' interview with those of the ENs in the FGD. This was vital because the ENs would have raised concerns in the FGD which the principal's interview would address, hence the need to keep these two aligned to the same locality.

Phase two used simple random sampling technique. This sampling technique was selected for its strength of leading to low risk factor (Levy & Lemeshow, 2013). The study population was ENs as they are the primary source of information for their barriers and facilitators, on the UNMC roll and working in Uganda, who consented to participate in the study. Enrolment with the UNMC was an essential recruitment factor as it confirmed those ENs who had joined the profession. Since the scheme of service (MoPS, 2017) considered the Enrolled Comprehensive Nurse (ECN) as an EN, then the study included both the ENs and ECNs as the study population. Following the guideline of two years practice requirement for eligibility to advance to the RN (Nabirye et al., 2014), the candidates who didn't have this requirement were excluded, because they wouldn't be meeting eligibility to advance yet. This left a sampling frame of 24,296 ENs. These were drawn from all parts of the country including rural urban placement and the private, NGO & government organisations. Details on selection criteria for study participants in all the phases is provided in Table 21.

Table 21: Selection criteria for study participants.

Objective	Inclusion criteria	Exclusion criteria
1. Explore experiences, aspirations and needs of ENs with respect to advancing their nursing careers in Uganda.	ENs Work experience (2 years or more) Not in school Works in selected regions	Sick or unwell, on maternity or paternity leave
2. Identify barriers and facilitators for educational advancement of ENs in Uganda.	ENs Work experience of 2 years or more Not in school	Sick or unwell, on maternity leave or paternity leave, contact not in UNMC database
3. Examine the suitability of EN advancement programs in meeting their education needs.	EN advancement program head. School present in or neighbouring FGD district	Sick or unwell, on maternity leave or paternity leave

4.7 Sample size calculation

For phase one there were four FGDs and targeted ten participants in each FGD. The decision of the number of FGDs was influenced by qualitative research scholars (Cleary, Horsfall, & Hayter, 2014; Crabtree & Miller, 1999; Morgan & Krueger, 1998) who recommend between three-five FGDs to exhaust a phenomenon. Researchers (Loeb & Penrod, 2006; Lunt & Livingstone, 1996; Ritchie et al., 2013) also suggest the FGD size to include is 6-10 participants, while some recommend an optimum number of eight participants (Stalmeijer et al., 2014). Phase one targeted ten ENs per FGD to allow for withdrawal or people not turning up on the day.

As phase two was a quantitative cross-sectional survey, the Kish Leslie formula was used to calculate the sample size (Charan & Biswas, 2013:p122; Kish, 1995).

$$\text{Sample size} = \frac{Z_{1-\alpha/2}^2 P(1-P)}{d^2}$$

where

$Z_{1-\alpha/2}$ = is standard normal variate (at 5% type 1 error ($P < 0.05$) it is 1.96 and at 1% type 1 error ($P < 0.01$) it is 2.58). As in majority of studies P values are considered significant below 0.05 hence 1.96 is used in the formula.

P= Expected proportion in population would have been based on previous studies but as there wasn't any, it was estimated at the recommended 50%.

d = Absolute error or precision – set at 0.05

$$\text{Sample size} = \frac{1.96^2 \times 0.5 (1 - 0.5)}{0.05^2} = 384.16$$

The non-response rate was adjusted at 10% hence $384 + (10/100 \times 384.16) = 422.576$

Therefore, the target sample size was 423 ENs.

For phase three, sample size was determined by saturation of the data (Saunders et al., 2018), when no new information was obtained from further data (Fusch & Ness, 2015; Morse, 2015; Saunders et al., 2018).

4.8 Data collection instruments

For phase one, a FGD guide which was researcher developed informed by the literature presented, but flexible and open allowing the participants to direct the conversation rather than rigidly seeking answers to pre-determined fields (see appendix 5). Following the guideline for construction of effective focus group questions (Stalmeijer et al., 2014), the FGD tool had five main types of questions. These were opening, introductory, transition exploration/key, and ending questions. The whole discussion was supported by use of carefully situated probing questions, to elicit greater clarity (McIntosh & Morse, 2015). The FGD guide was pretested through one FGD of ten ENs working in Kampala district. These were recruited from various public and private hospitals. They were identified through appropriate workplace leadership.

Phase two data collection used a researcher-administered questionnaire (Appendix 6). The tool was a self-developed questionnaire grounded on concepts identified within current literature, after failing to find an established appropriate comprehensive instrument. The tool was further improved following the results of phase one. It was pretested on 10% of the total study sample which was forty-three (43) ENs (Doody & Doody, 2015; Perneger, Courvoisier, Hudelson, & Gayet-Ageron, 2015; Reynolds, Diamantopoulos, & Schlegelmilch, 1993), identified randomly from data provided by UNMC. Those who participated in the pre-test were excluded from the study sampling frame. Literature suggests that a pre-test be administered to

the same context but not to those who are expected to actively participate in the study (Colton & Covert, 2007; Mohamad, Sulaiman, Sern, & Salleh, 2015). It is purposed to address the consistency of the research instrument rather than to add study findings. The tool scored a Cronbach alpha score of 0.792, thus the results from this tool were deemed reliable (Taber, 2018; Tavakol & Dennick, 2011). While this phase explored the barriers and facilitators, it also explored the findings of phase one, a benefit of the sequential approach. Several tools looking at barriers and motivators studied populations that had already enrolled into programs, hence could fit this study's target population. Others studied significantly different populations from ENs or did not explore all the parameters that would suit an EN in a low resource environment, (Alshehry, 2016; Romp et al., 2014; Sarver et al., 2015). The questionnaire combined a mix of structured and open-ended question formats, aimed at generating a range of both quantitative and qualitative data in relation to each key variable. The tool had six sections. Section one of the tool focused on participant demographic information, while section two focused on experiences, aspirations, and needs, and included thematic findings of phase one. The input from phase one utilized mainly open-ended questions. Sections three & four were the major sections focusing on barriers and facilitators respectively, while utilizing a Likert scale structure. Section five focused on flexible education designs, while section six concluded with a focus on learner readiness for online learning, which was a key platform for implementing flexible education.

Phase three data collection utilized face-to-face in-depth interviews using a semi structured interview guide (appendix 7), the content of which was informed by literature and the Cross' chain of response model (Cross, 1981). In addition the results of phase one and two added pertinent content of experiences and needs of ENs across the country, which were used as discussion points within the interview (Moser & Korstjens, 2018). Prior to its use, this instrument was pretested on two EN advancement program principals. Interviews are synchronous in time hence provide an opportunity for the interviewer to take note of cues such as voice and intonation of the interviewee (Opdenakker, 2006). The interviews were digitally recorded to ensure accuracy of data capture and were augmented by handwritten notes, to recommends overcome any mishaps with recording Creswell (2014). Permission was sought from interviewees for the audio recording. Data collection and analysis was simultaneous to allow enrichment of subsequent interviews (Moser & Korstjens, 2018; Neuman, 2014) and notification of saturation.

4.9 Trustworthy and reliable data

There are four aspects of trustworthiness that qualitative research must establish, and these include credibility, dependability, transferability, and confirmability (Cypress, 2017; Guba, 1981; Korstjens & Moser, 2018). Credibility in this study relates to how much information was accurately gathered to reflect the many realities of the EN in relation to their educational advancement to the RN. As supported by Carcary (2009); (Moser & Korstjens, 2018), credibility was established through detailed engagement with the ENs and their program heads hence enabling triangulation of data from a variety of sources. Transcripts were shared with participants to provide validation (Korstjens & Moser, 2018; Shenton, 2004). Transferability was ensured through provision of background data to establish context of study and detailed description of phenomenon in question (Korstjens & Moser, 2018) and purposive sampling (Cypress, 2017; Shenton, 2004). Confirmability was ensured through in-depth methodological description using the COnsolidated criteria for REporting Qualitative studies (COREQ) guideline (Tong, Sainsbury, & Craig, 2007) to allow construction of an audit trail through which the integrity of research results could be scrutinized. Dependability was ensured through triangulation by incorporating the ENs FGD results into the principals interviews through probing questions, and in-depth methodological planning (Korstjens & Moser, 2018; Rendle, Abramson, Garrett, Halley, & Dohan, 2017).

Validity, the degree to which an instrument accurately measures what it intends to measure (Heale & Twycross, 2015), was ensured by use of experts to check content validity (Kimberlin & Winterstein, 2008; Zamanzadeh et al., 2015). As recommended by Zamanzadeh et al. (2015), a panel of five experts was considered (appendix 8). The criteria for selecting them was that they had current experience and understanding of what was happening with the EN-RN advancement education in Uganda. This was exhibited through their being a leader of an EN-RN program/school, and/or had also participated in context relevant research in nursing. Four of the five were current program leaders while one was active in relevant research while heading a related program. The assessment of content validity was carried out before the pre-test. The instrument was sent to the experts through email and hard copy delivery depending on what each expert preferred. Reliability, the degree to which an instrument yields consistent results (Ary, Jacobs, Irvine, & Walker, 2018; Heale & Twycross, 2015; Tavakol & Dennick, 2011), was ensured through internal consistency reliability by checking its Cronbach's alpha value. Since

this was exploratory research, a value between 0.7-1.0 was considered reliable (Heale & Twycross, 2015; Taber, 2018). The survey tool scored a Cronbach's alpha value of 0.792 indicating good internal consistency (reliability) of the tool. Since the tool had multi-dimensional sections measured on different subscales, the section Cronbach's alpha values were also noted as 0.796 for the barriers (22 items); facilitators 0.903 (20 items); 0.864 readiness for online learning (6 items); and 0.544 for the choice of study designs.

4.10 Data collection process

For phase one, the researcher identified ENs from each of the four major regions of the country: Central, West, East, and North, and these took part in the four FGDs. Within each of the regions, one district was conveniently sampled for having ENs in their nursing workforce and being accessible on the highway. The selected districts were Wakiso district in the Central region; Kabale district in the Western region; Oyam district in the Northern region; and Jinja district in the Eastern region. In each of the districts, the researcher worked with the Assistant District Health Officers (ADHO) who are the heads of nurses in the districts. In some districts additional administrative clearance was required for entry into the district and these were cleared, appendix 9. A participant recruitment letter, (appendix 10) was shared with the ADHO and sent out to all nurses in the district through the ADHO to facility in-charges to be put on noticeboards of health centres. This letter was also put at the ADHO offices where it was placed on the notice board as a poster. The ADHOs office/notice board was central, and many nurses came to it as they came to pick other information. This ADHO office was most accessible as it was always in the centre of the district and was always used for information dissemination. Also working with the ADHO, information was sent to the different health facilities.

This was followed by closely working with the ADHO and a list of 20 ENs who were interested to participate in the study and met the selection criteria (see table 21) was generated in each selected district. Their contact telephone information was also got through the ADHOs office. The recruitment of ENs from the list of 20 followed two parameters, i.e., first come first selected and the ownership of the facility being public or faith based/NGO. These ENs were working in hospitals and health centres within the district whose ownership was either public or faith based/NGO/private. The researcher communicated with them by telephone to inform them about the study by reading to them the information on the participant information sheet

(appendix 11), and then sought their consent to participate. They were contacted in order of the names on the list received, the first ones being contacted first. On average about 12 were contacted before the targeted number of 10 was reached. The first ten to accept participation were recruited for the FGD to allow for drop out on the day of the FGD.

Once the required number of 10 ENs was reached, an appointment for the FGD was set and communicated. In Jinja there were two ENs who confirmed participation but later showed uncertainty of their confirmation due to an event that was happening. They were replaced, but on the scheduled FGD day they showed up, this led to overbooking by two participants. A central venue was sought in each of the districts, and this was communicated on phone. Close to the day of the interview, reminder communication including where and when the FGD would take place and directions, were shared. One reminder message was sent out to participants prior to the appointment day on the short message service (SMS) and WhatsApp. One of the planned FGD days became a public holiday (Eid) and this had to be changed with mobile telephone calls and SMS, while others went as planned. The starting time varied from what was planned with some participants coming late, often on average of 30 minutes after communicated start time.

For all participants, signing of the consent form was done on the actual day prior to the start of the FGD (appendix 12). Prior to the signing of consent form the researcher again explained the study to participants and provided time for participants to ask questions. Two of the four FGDs took place at the district office (a room was organised) while one was in a school conference room and the another in a hired hotel workshop room. Three of the four FGDs took place on a working day, while one was on a Saturday. All the venues were central in relation to where participants were coming from or their workplaces to minimize participant travel time and interruptions to work. The rooms utilized for the interviews were spacious quiet and had round sitting arrangement. The duration of the FGDs was between 1.5-2 hours. Prior to the FGD an average time of about 30 minutes was spent on pre meeting talks i.e., going through the consent form and responding to participants questions. Questions were asked especially on data backup and dissemination. A research assistant had been recruited and he oversaw the recording, timing, note taking, snacks and some local arrangements such as showing participants where places of convenience were located. The language used in the discussion was English. All the ENs were fluent in English, this could be related to the fact that Uganda's formal education language is English and all ENs usually have taken a minimum of thirteen years of their formal education in

English. At all the locations, the FGD began a bit late between 10 minutes to an hour. The latest was in Jinja where there was heavy rain/down pour on the morning of the interview, as well as it being scheduled on a Saturday morning, which could also have contributed to the delay, when people are usually in a relaxed weekend mood. A snack and drink were provided before the interviews, to occupy those who had come early, and drinking water available for people to access during the discussion if needed. Local newspapers and magazines were also provided for anyone to read if they wanted. Wi-Fi was available for those who wanted to use it. The start of the FGD was delayed until all who confirmed attendance were present, as the researcher respected all of the participants and the time they gave to be involved in the study and also wanted to reduce the number of interruptions (Freitas et al., 1998). This was important to have all participants at the beginning so as to understand the ground rules, create rapport and remove disruptions of anyone joining later (Breen, 2006; Freitas et al., 1998; Nagle & Williams, 2013). The researcher also played many roles in the FGD as interviewer, moderator and note taker. The researcher sat in the circle of participants while the research assistant sat outside the circle, but close enough to see and hear all the participants. The recorder was placed in the centre of the FGD circle.

For phase two, the Uganda Nurses and Midwives Council (UNMC) register (or roll) of ENs served as the sampling frame. The researcher contacted the UNMC to access the EN roll which holds their contact information. A letter requesting permission to access this information is attached as appendix 13. Using the information from the roll simple random sampling, in the form of a Research Randomizer (Urbaniak & Plous, 2013) was utilized. The total number of ENs on the register who were eligible to upgrade and being considered for this study was 24,296 ENs (UNMC, 2017a). The result of the randomized list is attached in appendix 14. With permission, the researcher recorded the contact information of the ENs in the selected positions, noting their nursing serial number. The researcher and/or assistant contacted each of the selected ENs to share the participant recruitment letter and seek their participation on the phone. If the response was positive, the research team would proceed to further explain the study and share the participant information sheet (appendix 15), using email, phone or hardcopy sent to their address, whichever was agreeable and practically possible. After studying the information, the consenting process (appendix 16) mirrored the same approach. At any stage of the data collection process the EN could withdraw from the study and their responses would be excluded. If the EN selected

did not have a working telephone contact or was unreachable after five attempts on separate days (with minimum interval of one day), the next one on the list was selected. The questionnaire was available in two formats. As a paper document (hard copy), planned for distribution to participants for completion by hand and collected when completed, however, due to COVID19 safety concerns this method was replaced by telephone administration (an amendment approved by University ethics, appendix 17). The word document format planned for mailing to ENs to be completed and returned electronically was never used, participants when contacted preferred the researcher filled form using telephone. The researcher consulted with participants to decide which option was most convenient for them and all selected the telephone, as this was more convenient as they did not have to do anything (such as logging on email, downloading, and filling forms); also they could respond from any location and time of their choice. While an online question was an option, especially to fasten data entry, the hard copy was preferred for easier tracking to make sure data was recorded clearly and accurately. Further, this was happening at the time when there was a lockdown with minimal possibility for moving. Therefore, the hardcopy was preferred to reduce the need for movement while seeking support for the online tools.

The sampling frame was checked to avoid any duplication by scrutinizing similar names against the license numbers and other demographic information captured on the roll. The roll information sent to the researcher was also checked for any omissions against the publicly available information at <http://hris.health.go.ug/reports/unmc/registration.html>. Each survey completed was anonymised and coded, and once data collection for the survey was completed, all contact information obtained from the UNMC was coded and the master list locked away securely so only the researcher could access it. Following successful completion of the PhD and publication of findings, all the contact information obtained from the UNMC will be deleted from the researcher research computer and external hard drives. Any printed material containing contact information of the participants will be shredded (following ethical guidance).

For phase three, the researcher contacted the principals' association general secretary (head) to seek an opportunity to share the participant recruitment letter to the association members. The researcher then followed up and contacted the principals seeking their participation. In their selection the researcher also purposively selected to allow regional representation, so that not all were from the same region. Preference was to first select those

principals in the districts where the FGD had taken place. This followed a cycle of central, western, northern and eastern regions. This cycle continued until saturation was reached after the ninth interview when no new themes emerged. Early contact with interviewees was made to agree participation, alongside making appointments and reminders for the interviews and agreeing a suitable date and time of their choice. The participant information sheet was shared (appendix 18). Once the participant agreed, this was followed up with an appointment request for the interview. Where possible the interview was conducted when they were in their offices but using the telephone. Only two preferred to take it in the evening and from their homes. The interview was audio recorded and took between 45-60 minutes. Using telephones to conduct in-depth interviews was a faster, easier way to approach the widely spread participants. The telephone interview worked out well because it required less time to schedule and conduct than a face-to-face interview (Rahman, 2015; Rohde, Lewinsohn, & Seeley, 1997; Stephens, 2007; Sturges & Hanrahan, 2004).

The approach to the interviews in phase three took an indirect pathway to examine the suitability of EN advancement programs in meeting their education needs. The approach avoided items/questions that would elicit yes/no answers, avoided asking closed questions like ‘do you think your program is suitable for meeting EN advancement education needs?’ Instead, it sought narrative descriptions of how the EN advancement program was organised/structured and how it was running. Some of the areas explored were the motivation for starting the program, the target population of ENs, the usual background of the niche, structure of the program, how work school and family commitments were handled. Further, the principal’s own description of the ENs experience of going through their advancement program.

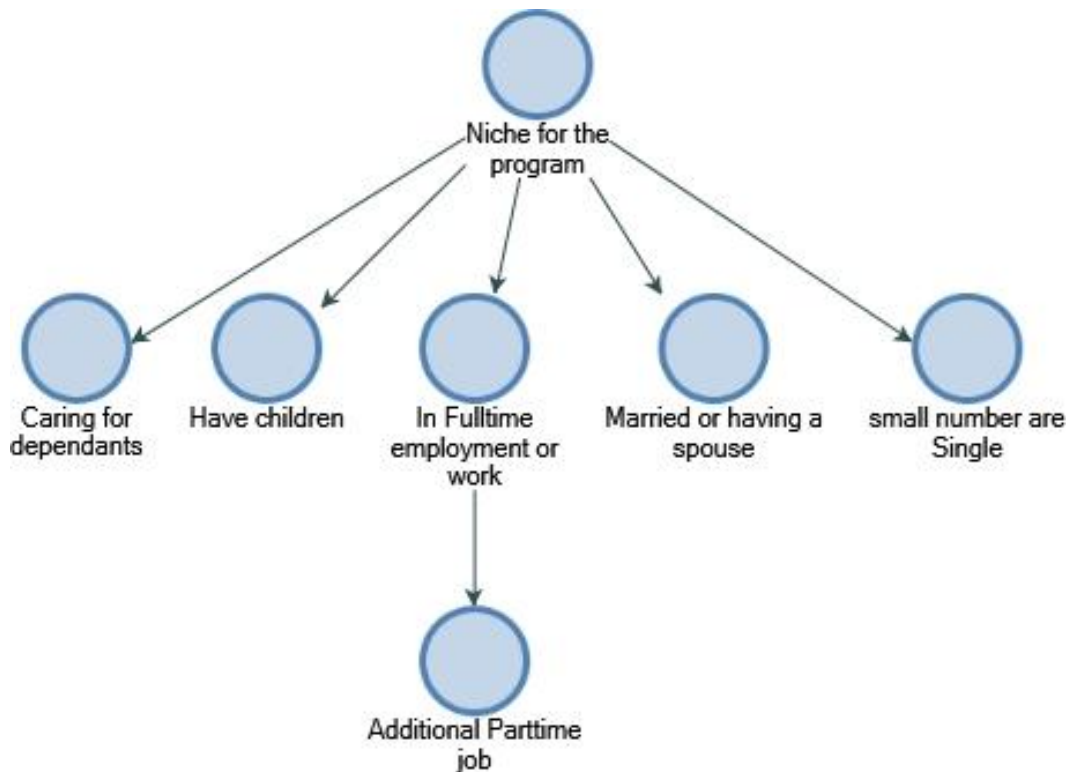
4.11 Data management, analysis, and presentation

4.11.1 Qualitative data management and analysis

Qualitative data analysis utilized content analysis approach to reveal the themes and categories (Neuendorf, 2016; Ritchie et al., 2013; Vaismoradi, Turunen, & Bondas, 2013). The FGD analysis was manually done with the aid of MS word functions, while the interview analysis was supported with the NVivo software, these two approaches followed similar steps. This commenced with verbatim transcription in MS word. For the FGD the process continued in

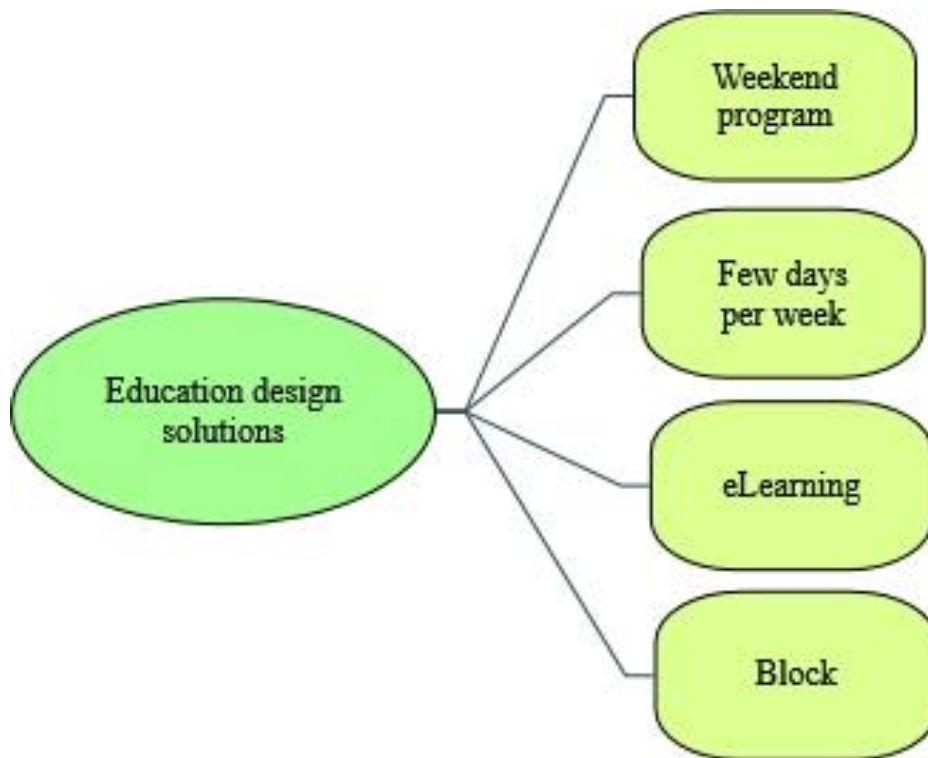
word while for the interviews of phase three, the analysis was done in NVivo. The transcribed interviews were exported to NVivo software, and was followed by coding and categorization or theme making in NVivo (Mayring, 2014; Merriam & Tisdell, 2015). The transcribed interviews were imported into the NVivo software as individual data files and were anonymized by code abbreviated identifiers known only to the principal investigator and stored on a password protected computer. The transcripts were then read and re-read to gain acquaintance and examine the suitability of Ugandan EN advancement programs in meeting EN education needs, which was the primary objective for this phase. After the familiarization of the data by reading through all the participant transcripts several times, the researcher then identified, highlighted, and coded all significant statements in the transcripts. Coding was developed using relevant nodes that matched the data in the transcripts while seeking elements that brought out the suitability of EN advancement programs, see example in figure 6. These were then grouped to form categories and regrouped to form themes. The coding process was emergent inductive, hence purely informed by the transcripts (Bryman, 2016; Saldaña, 2015).

Figure 6: showing example of the coding process



Coder reliability was ensured by using a second coder. In phase one (FGDs), this was a senior researcher and professor with a nursing background while in the phase three (interviews) it a senior member of the data collection process who had several years of nursing work and knowledge of the Ugandan EN-RN education context. Sections of transcripts that exposed the lack of suitability were also coded and taken as areas in which suitability-construction was needed. The codes were developed in an emergent approach to create a code structure (Guest et al., 2020; Merriam & Tisdell, 2015; N Romm & P Ngulube, 2015). Coding started at a broad level and went on reclassifying to build relevant codes that answered the key objective on program suitability. This was later reviewed by going back to each code to examine the range of data items presented under a single theme and refined, a process called coding on or axial coding or analytical coding (Creswell, 2014; Merriam & Tisdell, 2015; Neuman, 2014), hence developing a more astute code structure see example in figure 7.

Figure 7: Example of the refined codes



During this process, feedback mechanisms ensured the depth of meaning was captured by confirming that primary node names were taken back to the transcripts, queried and searched. During this process alternative words were sought through ‘text search query’ using exact matches. For example: Absent; stemmed words such as absenteeism; synonyms, such as away/miss; specializations such as inconsistent or dodging or default and generalizations, such as not coming or not attending. A ‘word frequency query’ was run to ascertain frequency of the node terms, that they had sufficient codes/quotes to support them. Node relationships were also reviewed to ensure that nodes were positioned on relevant stems.

Data analysis used NVivo software to code, organize and generate visualizations for presentation as outputs and was presented in narrative form (QSR International Pty Ltd, 2012). The coding used the interview transcripts while analysis used word queries, using cases which only picked up the narrative of the interviewee and avoided the interviewer’s narrative in form of questions. COREQ guidelines provided the framework for reporting of the FGD and interview results (Tong et al., 2007). In comparison to O’Brien’s Standards for Reporting Qualitative Research (SRQR) (O’Brien, Harris, Beckman, Reed, & Cook, 2014), COREQ was used because it was specifically developed for FGDs and interviews. The COREQ checklist promotes explicit and comprehensive reporting of qualitative studies (interviews and focus groups). COREQ is a comprehensive checklist that covers necessary components of study design, which should be reported. The criteria included in the checklist helps researchers to report important aspects of the research team, study methods, context of the study, findings, analysis and interpretations. Reporting of the qualitative results was limited to three generations, i.e. themes, subthemes and codes (or parent, child and grandchild) (Adu, 2019; Roth, 2019).

4.11.2 Quantitative data management and analysis

All completed questionnaires were checked for completeness ahead of data entry. Thereafter, each questionnaire was assigned a unique identification number for reference purposes. Data coding and entry were used the EpiData 3.0 application software in a suitably pre-designed template capturing all the variables. This template was also designed with inbuilt appropriate checks to minimise human errors that could arise during the data entry exercise. Epi-data checks such as validation checks to capture consistency, track duplicate entries, range checking, legal values and skip patterns were used to reduce data entry errors. Following

completion of data entry, the data was exported into Stata/SE 14 (64-bit), then cleaned, to create a dataset from which to interrogate and analyse. In the cleaning process, the codes entered for “no response” and “not applicable” responses for both categorical and numerical data were deleted for appropriate treatment as missing data during analysis.

All quantitative data was analysed using Stata software. Descriptive statistics were generated from univariate analysis and used to report measures of central tendency, measure of spread/dispersion and associations. To test for statistical significance, test of proportions and the student t-test were used, as appropriate. Statistical significance was determined at the alpha level 0.05. The one-sample proportions test was applied for categorical variables to identify aspirations, needs, best time of career advancement to RN level, and preferred program arrangements and designs; drawn from phase one of the study. A category was interpreted as the most preferred if it constituted the highest proportion and had a p-value <0.05. A null hypothetical proportion was set by dividing 100 into the number of the given categories under each variable. The student t-test was applied for Likert scale variables to identify the barriers, facilitators, and participants’ readiness for online learning. Since the Likert scale involved a range of values from 1[strongly disagree] to 5[strongly agree] (where 3 was the value of “not sure” or simply undecided), all t-tests were made against 3 as the null hypothetical mean. A variable whose overall score was above 3 (i.e., agree or strongly agree) and calculated percentage above 75% was interpreted as a significant finding for the element under investigation. Mean scores from the Likert scales were calculated by converting the Likert scale of 5 to a 0 – 100 scale, such that ‘Strongly Disagree’ became 0, ‘Disagree’ became 25, ‘Not sure’ became 50, ‘Agree’ became 75, and ‘Strongly Agree’ became 100 (Huang et al., 2007; Murray, 2017). Each item score was equal to the mean score of its survey response frequencies. This was applied to barriers, facilitators, preferred education designs and readiness for online learning.

The survey quantitative data was initially presented in tables, graphs, charts, percentages, and frequency distributions. To achieve meaningful integration, these were deconstructed and reconstructed at the integration stage allowing for enrichment from the three methods results, hence providing more comprehensively informed recommendations for the EN-RN advancement elements and framework, as seen in the recommended table of model elements needed in the construction of flexible advancement education in chapter eight. Further, this integration and deconstruction-reconstruction approach allowed for the final integrated results to be presented

with a blend of narrative form and some tables/graphs, (Morse & Niehaus, 2009/2016; Plano Clark, 2019).

During analysis, elements that made it to the code level in the qualitative phases and those that scored a Likert calculated percentage of 75% (agree or strongly agree) in the survey, were considered. Since this was a mixed methods study, the data from various phases was used to validate/support each other. For qualitative data which had similar presence in the survey, the survey results were indicated even when they scored below the 75% mark.

4.11.3 Data integration

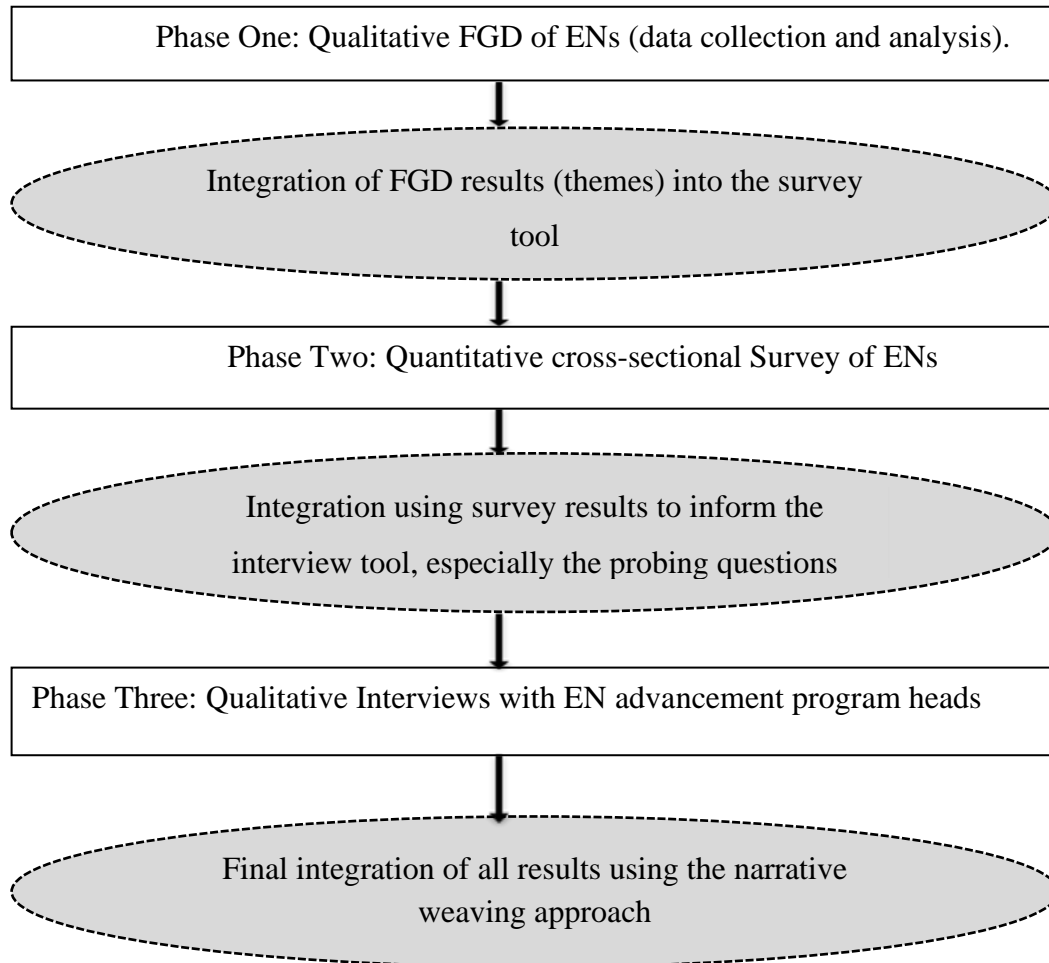
Data integration for this study took place at different points; initially data collection, analysis, and reporting within each phase and sequential building of integrated data sets as phases developed (figure 8). The integration between phases was to improve understanding of concepts to enrich subsequent phases while the final integration was to confirm and explain findings.

Immediately after the FGD analysis, integration facilitated the opportunity to use the FGD results (themes) and these were integrated into the survey tool to determine if the experiences and perceptions of the wider population corresponded to the FGD sample, whether they were generalizable. After the survey, the integration opportunity was to determine whether the themes and categories generated from the earlier FGD corresponded to the barriers and facilitators from the survey. Particularly the FGD findings were integrated with the survey, as there were various commonalities hence opportunities for improving their understanding. For example, they both focused on a population of ENs who had not advanced to RN, and while the FGD studied the experiences aspirations and needs, there were similar findings from the survey which studied the barrier and facilitators. This provided an opportunity to integrate results. Additionally, both FGD and survey results were used to improve the phase three interview tool, especially informing the probing questions. For example, phase one results were used to improve the data collection tool for phase two, while the phase two results were useful to inform the tool for phase three, especially for the probing questions. In the interview tool, probing questions were added on various items. For example, item/question one, was enriched to target information on program enrolment, when started, admission capacity Vs available number of students, motivation to start the program, full time status, and residential requirement. The tool was also

reorganised, and additional items were introduced or restructured. For example, item/question five was introduced after earlier phase results showed that ENs struggled with school regulations. As well, probing questions were also structured in some of these areas such as pregnancy, requirement to be fulltime resident at school, and timelines for clearing tuition.

The final integration, also the main integration was drawn together at the results point of interface allowing the mixing of multiple results from all the three phases of the study (see Figure 5 and figure 8) (Morse & Niehaus, 2009/2016; Plano Clark, 2019). This was made possible by mixing all the already constructed phase-specific results which was a silo view, then re-constructed the new integrated results through a process of deconstruction and re-construction to achieve meaningful integration (Plano Clark, 2019). For example, according to the FGD, the top needs in seeking career advancement were tuition and flexible scheduling; whereas in the survey the highest score for was Tuition support or scholarships 358 (95.5%) $p < 0.001$; and yet in the interviews it was flexible education designs. These results were carefully studied to reconstruct integrated results hence building corresponding themes such as Worries of Unaffordability and unavailability, Tuition fee concerns and Seeking suitability. This integration was at the interpretation and reporting phase and used the narrative weaving approach (Fetters et al., 2013).

Figure 8: Integration strategy flow diagram



This narrative weaving approach allows the researcher to present the results in a single section while weaving the qualitative and quantitative findings on a theme or concept, hence the reconstruction. The integrated results were collectively able to describe comprehensive EN-RN advancement seeking experiences, aspirations, and needs; barriers and facilitators, including the elements to consider when designing responsive EN-RN advancement education for low resource environments like Uganda. The presentation of results followed the product from the integration by narrative weaving approach.

Of interest here was that while the FGD and survey participants were ENs, the interview participants were school principals. Therefore, the integration allowed bringing the findings from both ENs and principals to look at the issue of EN advancement from multiple perspectives of the ‘to be served’ and the ‘server’, hence an incredible integration and key goal of the mixed

methods. This led to the development of a key outcome of this study which was the table of model elements needed in the construction of flexible advancement education for ENs in Uganda.

4.12 Ethical considerations

Ethical approval was sought and acquired from the University of Salford, once approved a further ethics approval was obtained from a Ugandan accredited Research Ethics Committee (THETA REC, appendix 19) and a research permit from the national research regulator (Uganda National Council for Science and Technology, 2016) (appendix 20).

Due to the COVID19 pandemic two changes were required to allow the research to progress, this involved moving away from earlier planned face-to-face interviews to using telephone interviews, to reduce risks associated with physical meetings, when COVID19 community spread was at its highest in Uganda. Only the mode of communication changed, all other processes and content of interviews and surveys remained as planned. Although the in-person interviews were preferred and are seen as superior, my experience from this study proved that when telephone interviews are well planned and orchestrated, they can be a formidable alternative (Dapzury, 2003; Edwards & Holland, 2013; Rahman, 2015; Wilson, 2012). Some of the factors responsible for success were advance communication with the interviewees to provide information of scheduled interviews. Further, the plan to allow participants choice of where and when to have the appointment, including the choice of weekend and evening provided an opportunity for uninterrupted dialogue. Interestingly some preferred to have the interview at their homes, in a relaxed and reflective environment- a reality that would not have been possible with the in-person interviews. Consequently, while the telephone interviews are underrated, they could provide flexibilities that cannot be accorded to the in-person interviews (Edwards & Holland, 2013; Rahman, 2015; Wilson, 2012). The changes did not present any new foreseeable ethical issues. The telephone interviews were administered via the participants' telephone numbers which they used regularly for their communication; this change required additional ethics approval (appendix 17).

The participant information sheet was shared with each participant selected, and consent was also obtained from each participant days before the data collection. Although the consent was provided verbally on phone days before the event day, for the FGD they signed their forms

on the FGD day; while for the survey and the interviews, a consent form was initialled and filed as a record. For the FGD and the survey, the PIS was shared either on email or read to them on phone, whereas for the interviews, this was sent on email and also on their phones through the WhatsApp document sharing service as an attachment. Participant information and responses were anonymized and stored securely on password protected computers, accessed only by the researcher. During the study, all electronic research data was stored on a password protected computer, accessed only by the research team, and backed up on the University secure F drive. The data will be stored for a minimum of 3 years. Research participants were informed that their participation was voluntary, and this was also reinforced in the participant information sheet. Withdrawal from the study could take place at any time, and all participants were aware that their data could also be removed prior to the data analysis stage, once analysed and integrated it was impossible to separate the individual data items.

The study topic did not address sensitive and/or distressing issues to make participants uncomfortable, and no participants reported distress at any point throughout the study phases. However, there was a plan if distress was to be experienced by participants, the interview was to be paused to allow recollection and then continued at the indication and wish of the participant. If the participant felt unable to continue, the interview would be terminated, and a new appointment made at an appropriate time. A counsellor was arranged and on standby, in case participants required further support to discuss any distress related to the study data collection.

The FGD research participants were reasonably reimbursed for transport costs which was a direct expense incurred for the research, a flat fee was agreed which was UGX 30,000 (about GBP 6.69). Considering that the distances were short and in different directions with no single public transport company into those directions, it was not possible to use coupons. The meeting rooms were comfortable and centrally located in the selected districts, quiet and away from distractions.

In phase two, there was no travel expense on the part of the participant, hence no reimbursement was provided. However, since participants were required to receive information from the research team, UGX 5,000 (GBP 1.2) was provided for internet data bundles to access the shared material. Also, in phase three, there was no cost to the participant as it was a telephone interview during working hours, with not travel required.

4.13 Dissemination

Dissemination of study finding was planned through conference presentations and publications. The researcher plans to arrange targeted dissemination to the principals' association (a forum that brings all nursing school heads together), the Business, Technical, Vocational Education and Training (BTVET) department in the ministry of Education and the examination body (UNMEB), senior nurse leaders' forum, nursing professional associations and the professional regulator (UNMC). Abstracts will be submitted for the Ugandan annual nursing scientific conference to disseminate direct to the nursing workforce and Salford Postgraduate Research Conference 2023. These are relevant consumers of the study findings and will be key in post-doctoral research engagements. A series of peer reviewed publications will originate from the study to communicate and disseminate and extend the evidence base on EN advancement in Sub-Saharan Africa which will inform educational advancement programs of the future. These are discussed later in the thesis.

4.14 Chapter summary

The chapter provided the details of how the study was implemented, planned and executed following the mixed methods multiphase design. The three sequential phases generated original findings pertinent to the context of EN advancement in Uganda and the wider SSA. The decisions when underpinning the different phases reinforced the philosophy of selecting the right methods to answer the study questions not defined by a specific approach, although the depth and meaning of the EN experience and needs aspiring to advance to RN level remained the focus throughout. Indeed, understanding how as educationalists we could overcome some of the barriers by developing accessible programs was an outcome. COVID19 led to changes in how some of the methods were administered within the phases but fortunately had minimal impact on the quality and amount of the data generated. Table 22 provides a summary of the phases before the thesis progresses to present the results and findings. The mixed methods multiphase design, resulted in the findings from the phases being combined to provide depth, meaning and further explanations under themes which integrated the data where appropriate, creating two finding's chapters. Chapter five focuses on the EN as a person describing their experiences while chapter six focused on the institutions involved in EN-RN advancement education.

Table 22: Overview of the research study

Objective	Design	Method/ Tool	Sampling method	Sample size	Population
1 Explore experiences, aspirations and needs of ENs with respect to advancing their nursing careers in Uganda.	Qualitative FGD	FGD FGD guide	Purposive	38 ENs. (aim 4 FGDs with 10 ENs in each FGD)	ENs
2 Identify the barriers and facilitators for educational advancement of ENs within Uganda.	Cross-sectional Survey	Survey Questionnaire	Random	423	ENs
3 Examine the suitability of EN advancement programs in meeting their education needs.	Qualitative Interviews	Interviews Interview guide	Purposive	9 saturation of data	Heads of EN programs

Chapter 5: Experiences of ENs Seeking Advancement

5.1 Introduction to the results

Chapters five and six, present the findings of the study bringing together the integrated results to examine the advancement situation of ENs within Uganda. The study's mixed methods multiphase design approach sequentially utilised focus group discussions, a national survey and interviews to generate new and original data to inform and extend knowledge of the aspirations and experiences of ENs to understand the barriers and facilitators towards seeking and achieving career advancement. The views of stakeholders who were leaders of nurse education, were sought to examine the program suitability and identify how programmes could be adapted to meet the needs of ENs and the demands for a higher qualified nursing workforce in the future.

An overview of the study samples recruited for phases one, two and three, is provided and explanations of data integration and triangulation to generate deeper insight into key themes and issues that influence or inhibit EN advancement are presented. The results are presented across two chapters, this chapter focuses on the experiences and aspirations of ENs, what helps and what hinders their advancement. Chapter six draws together the institutional barriers and facilitators, in the workplace and schools, to understand what could be changed to create a smoother transition from EN to RN and increase the number and opportunities for ENs to advance their career, at a time that complements their personal situation, lives, and aspirations. Using the narrative weaving approach to integration, results from the three phases are utilised to complement each other.

5.2 Response rates across three phases

Data was collected within the study across three distinct sequential phases using FGDs, a national survey and individual interviews. An overview of the response rates and participation of ENs and stakeholders across the study phases are presented in table 23.

Table 23: Participant Response Rates

	Method	Participants	Recruited
Phase 1	Focus group (4 FGDs)	ENs	38
Phase 2	Survey	ENs	423
Phase 3	Interviews	School Leaders - Stakeholders	9
		TOTAL	470

The total number of recruited participants in this study was 470. The focus of the study was to understand the advancement experiences and aspirations of ENs in Uganda, so they formed the largest subgroup of participants (n=461) spread across two phases and methods. Heads of EN education called principals (n=9) were invited to take part in phase 3 to examine exiting programs suitability and identify a way forward for EN advancement that meets the nurses' needs.

5.3 Demographic profile of participants

5.3.1 Focus group participants

Thirty-eight nurses participated in the FGDs, with the majority (30) of ENs working at a government (public) facility, while eight worked at a private owned facility. The majority allocated at the government facility could be attributed to the participant recruitment process which was coordinated through the government office. Twenty-Six of the 38 participants worked at a health centre (level 2-4), while 12 worked at a hospital. The age range for participants was between 25-57 years, with a mean age for all the FGD participants being 34.3 years, the majority 71% were female (Table 24).

Table 24: Focus group participant demographic profile

	Region	M/F	Place of Work Government (G) or Private (P)	Type (Hospital /health centre HC)	Work experience Average/range (yrs.)	Age Average/range (yrs.)
1.	North	M=6 F=4	G = 8 P = 2	HC = 10	9.9 years (Range 3-30)	31.5 years (Range 26-57)
2.	Central	M=3 F=5	G = 3 P = 5	Hospital = 8	7.2 years (Range 2-31)	31 years (Range 27-55)
3.	East	M=1 F=11	G = 12	Hospital = 1 HC = 11	13.8 years (Range 3-19)	33.2 years (Range 25-47)
4.	West	M=1 F=7	G = 7 P = 1	Hospital = 3 HC= 5	12.5 years (Range 3-30)	41.7 years (Range 29-57)

The average working experience for the ENs at the study time was 10.85 years, which suggests that they had worked waiting for an opportunity to advance for nearly eleven years. Work experience gained waiting for an advancement opportunity ranged from 2 to 31 years, with most ENs (71%) having been waiting for over 5 years (Table 25).

Table 25: Years waiting for advancement opportunity

	0-2 years	>2-5 years	>5-10 years	> 10 years
Number of ENs	1	10	13	14

The level of engagement during the FGD was high with ENs enthusiastic about their contributions and educational advancement. Their passion for the topic signified strong feelings towards EN to advancement, and there was a general feeling of frustration towards their delayed or failed advancement aspirations.

5.3.2 Survey participants

ENs were selected from the professional regulator register and a randomized sample was recruited. The COVID19 pandemic disrupted all plans of in-person meetings, consequently the survey was researcher-filled using telephone communication with ENs. ENs indicated they preferred this option over emailing the survey, since they did not have to login or write anything, and it could be done at a time and location of their choice, without intruder (researcher) presence. Most ENs preferred to take the survey-filling-call from their homes when they were off duty, and this tended to be in the evening. Those ENs identified as potential participants if unavailable or declined participation, were replaced on the list, so the study met the expected sample size expectation as data collection continued until it was achieved.

Overall, 423 EN participants responded to the survey. The majority of ENs, 67.6% female, 58.6% married, with interquartile quartile range for age as 28 to 34 years. The majority (78%) of ENs had children, the median number of biological children was two. Further, 77.5% reported staying with additional dependants, 62.3% with siblings and 37.5% with parents (Table 26).

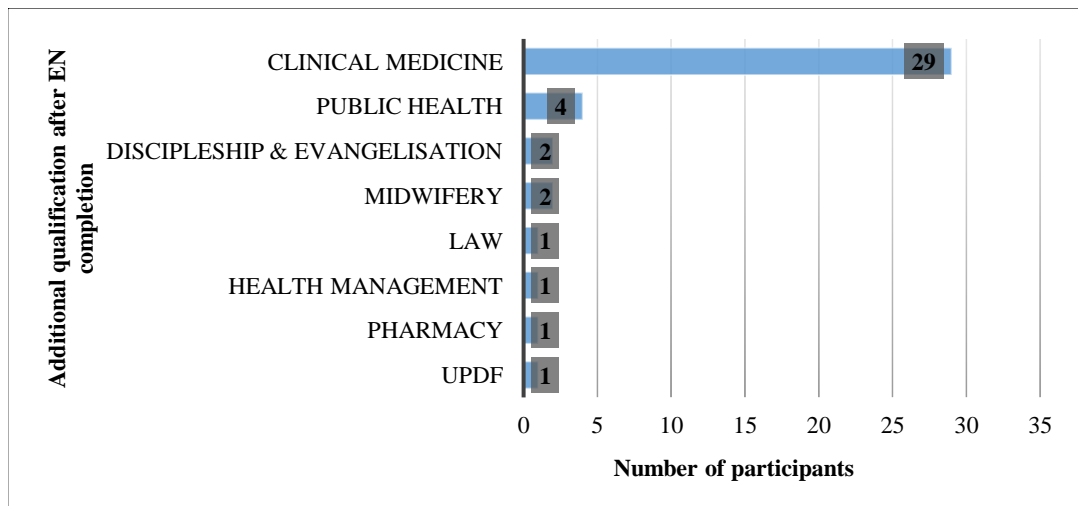
Table 26: Participant Characteristics

	Characteristic	N (%)	N
Sex	Female	286 (67.6%)	423
	Male	137 (32.4%)	
Marital Status	Single without children	78 (18.4)	423
	Single with children	55 (13.0%)	
	Living with partner	31 (7.3%)	
	Married (introduced or wedded)	248 (58.6%)	
	Divorced	4 (1.0%)	
	Widowed	7 (1.7%)	
Age	Median (IQR) range (years)	30 (28-34)	422
Dependent Children	Children	329 (78.3%)	420
	No children	91 (21.7%)	
	No. of children, Median (IQR)	2 (1-3)	329
Living with dependants	Live with dependants	328 (77.5%)	423
	No. dependants, Median (IQR)	2 (1-3)	328
Relationship with dependants	Siblings	203 (62.3%)	326
	Parents	103 (31.5%)	327
	Other relatives	123 (37.5%)	328
	Adopted children	5 (1.5%)	327
	Other dependants	6 (1.8%)	327
Period of EN completion	Before 2000	31 (7.3%)	423
	2000-2009	54 (12.8%)	
	2010-2016	338 (79.9%)	
Qualifications)	(Lasting at least 1 year)	41 (9.7%)	423
Region of current workplace	Central	152 (35.9%)	423
	North	46 (10.9%)	
	East	85 (20.1%)	
	West	120 (28.4%)	
	Not employed	20 (4.7%)	
Employing institution	Government	159 (39.5%)	403
	Private Not For Profit (PNFP)	72 (17.9%)	
	Private For Profit (PFP)	117 (29.0%)	
	Self-employed in healthcare	54 (13.4%)	
	Other	1 (0.3%)	
Work Position	Staff nurse	289 (72.1%)	401
	Ward In-charge	33 (8.2%)	
	Facility manager	63 (15.7%)	
	Other	16 (4.0%)	
	Average monthly income	500,000 UGX	381
	Median (IQR)	320,000-612,000 UGX	

A higher response rate was obtained in the central region (35.9%) and western region (28.4%), with 4.7% (20) ENs reported to be unemployed at the time of data collection. Whilst the government was the single largest employer (39.5%), the PNFP employers (29%) and PNF (17.9%) combined accounted for a higher proportion (42.4%) of EN employment. The staff nurse role (72.1%) was the most popular position where ENs worked in their respective employing institutions. Wages of ENs ranged from 320,000-612,000 UGX (Uganda Shillings) depending on the seniority of their work position (Table 26).

The majority of ENs (79.9%) had completed the enrolment training between 2010-2016, with 20.1% having completed before 2010. Yet over this time period only 9.7% (41) had acquired additional substantial training (educational advancement), lasting over one year since enrolment. Additional training lasting over a year is recognized as substantial and usually the EN will receive a certificate that could influence employment opportunities. From the 41 ENs who had accessed further substantial training, 29 completed a diploma in clinical medicine. Others (12) accessed training in public health, midwifery, health management, pharmacy; and non-health related courses like discipleship and evangelism, the armed forces-Uganda Peoples Defence Forces [UPDF], and law as seen in Figure 9.

Figure 9: Types of qualifications attained after completing EN training



5.3.3 Stakeholder participants

Nine senior members from nursing schools participated in phase three of the study from a population of 41 drawn from a variety of government and private schools (PNFP or PFP).

Saturation was reached by the ninth interview, when no new themes were emerging and the existing ones were being affirmed in the domains of financial limitations, lack of suitability with institution/program, work challenges, personal issues, and family concerns. Due to the global COVID19 pandemic and the disruptions that followed, the interviews had been planned as in-person face-to-face but were later conducted on phone. The demographic summary of the interview participants and their school profile is provided (Table 27). All were female and this reflected the target population, consequently the study sample was not skewed. This was also reflected in the general nursing workforce proportions where females dominated at 88% (Spero et al., 2011). Although efforts were made to recruit from all the regions, however, it turned out that most of the interviewed principals were from the west and central regions, with only one from the north and none from the east. This was also influenced by the busy diaries of these principals and a small window to recruit/collect data due to COVID19 delays. Irrespective of the area they came from, they all identified similar themes.

Table 27: Stakeholder demographic profile

NN	School Category (Government, PNFP, PFP)	M/F	Position	Region	Experience (yrs.)
1.	PNFP	F	Principal	West	14 years
2.	PFP	F	Principal	West	1 year
3.	Government	F	Principal	Central	6* years
4.	Government	F	Principal	West	2 years
5.	PNFP	F	Principal	West	21* years
6.	PNFP	F	Principal	West	1 year
7.	PFP	F	Principal	Central	4 years
8.	PNFP	F	Principal	Central	11 years
9.	Government	F	Principal	North	3 years

Head of school position for the different schools had various titles such as principal tutor, acting principal, assigned principal, Dean, and Head of nursing department with some titles being unique to a certain school. To avoid identifying any of the sample members, especially those with unique titles, the term ‘principal’ was used to group the participants and maintain anonymity. For those heads of school who had served as principal or deputy principal in a

different (previous) school with an EN-RN advancement program (marked with an asterisk * in the table), this was considered transferable experience, hence added to their working experience. Some principals had served in a school which did not have an EN-RN advancement program, hence that experience was not considered relevant. The principals had a working experience of managing the EN-RN advancement program ranging from 1-21 years, with five of the nine principals having less than five years while only four had an experience of more than five years. Three of the nine schools were government owned while four were PNFP and two were PFP.

5.4 Data integration and analysis

The study findings aligned to the COR model allowing mapping of the results to the original three core categorizations of dispositional, institutional, and situational. Although aggregation of data started with the COR lens for categorization of results, due to the inductive nature of the approach, some nuances emerged allowing re-categorization of the original COR themes, presented later in the chapter. The personal domain for example was categorized as either dispositional or situational, depending on what parameters of the individual were being examined. In addition, the weight of the financial barriers led to its elevation to high priority hence, contrasting to the COR model. Guided by the COR components, results from the three phases of the study were categorized into five domains of interest which included financial, school, personal, family and work (table 28). This was prior to data integration, showing alignment of each phase results to the COR model, matching the categorizations to the four areas of the study objectives; experiences, barriers, facilitators, and program suitability.

Since the data was collected over sequential phases, this allowed both an intra-phase and integrated phase view. The intra-phase view of data identified common domains across the three phases (table 28), while the integrated view merged common domains to produce unique themes (table 29). More details of the complete results are available as appendix 21 for the intra-phase view and appendix 22 for the integrated view.

Table 28: intra-phase view of common domains over the three phases

COR	Domain	Objective one (Phase one)	Objective two (Phase two)		Objective three (Phase three)
		Experience of ENs	Advancement Barriers	Advancement Facilitators	Suitability of current program
Dispositional	Personal	Regrets of unmet advancement aspirations	Lack of time	Self-readiness	Struggle to attend
Situational	Family	Swallowed/ consumed by family demands	Tied up by family caring role.	Support from spouse	High family care load
	Work	Less valued	Difficulty accessing study leave	Study leave with pay	Working chronic night shifts to get time for school
	Finances	Inadequate personal finances	Lack access to educational financing	Access to scholarships	Schools in debt.
Institutional	School	Inaccessible advancement education	Lacking flexible EN-RN programs	Access to flexible RN programs	Program structure not synchronized to niche realities

Table 29: Integrated view of themes

Alignment to COR	Chapter outline		Themes
	EN the person: Experiences and aspirations	Institutional: Educational and workplace issues	
Dispositional	Worries of unaffordability and unavailability	Tuition fee concerns	
Situational	Struggling with family responsibilities	Niche-program design mismatch	
Institutional	Locked out of advancement	Seeking suitability	

The above integrated table (29) presents how the three phases of the study, five domains of the results and four spheres of objectives were merged into a total of only six themes spread over two spheres. The two sections were the ‘person’ and the ‘institution’ representing the central focus for understanding the EN advancement question. The sphere on ‘EN the person: Experiences and aspirations’ focuses on the EN as a person and their personal circumstances.

This was spread into three themes which were ‘Worries of unaffordability and unavailability; Struggling with family responsibilities; and locked out of advancement’. The second sphere was ‘Institutional: Educational and workplace issues’ and it focused on the institutional domain including the school and the workplace. The subthemes in each of the themes are provided (figure 11).

There was data overlap across the phases and triangulation of themes and subthemes using the mixed methods was helpful to create a rich data set from which to explore and examine the advancement of ENs and the core objectives of the study, *appendix 21 silo and appendix 22 integrated* help this view. The themes and subthemes were cross cutting and transcended the silo domains to reveal interconnectedness. For example, financial challenges were seen as worries of unaffordability in the experiences and aspirations sphere, while the same was seen as Tuition fee concerns in the Educational and workplace sphere. Although they were packaged in unique ways, they meant the same financial challenges.

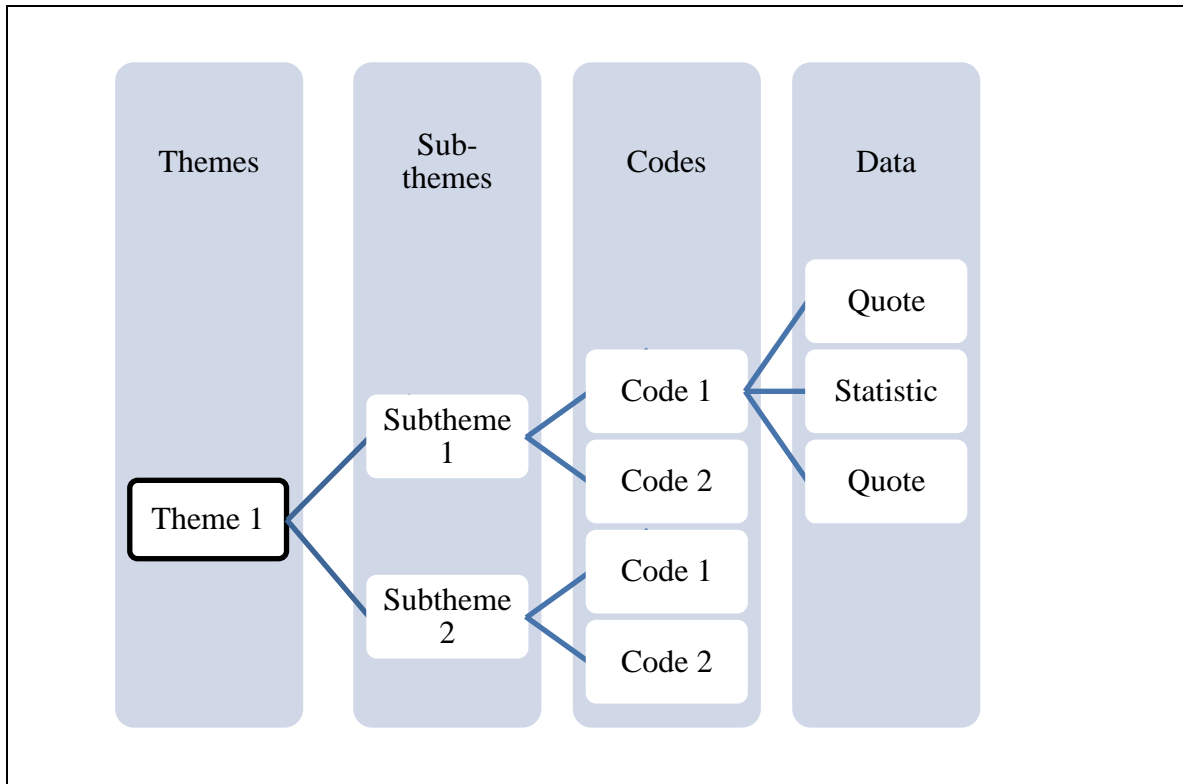
In exposing all the themes, subthemes and codes in a single table view, appendix 23 is provided for this purpose. It shows the details that emerged in illuminating the Experiences and aspirations as well as the institution issues for both the school and workplace. While the emergent themes were aligned to the COR model, the financial, family, and personal concerns were extrapolated, and they became themes of their own.

5.5 Structure of results presentation

The study findings are presented following the structure of theme to sub-theme to code (Creswell, 2014; Merriam & Tisdell, 2015). The data (text quotes and statistics) obtained from the two qualitative studies and one survey respectively, informed the development of codes. Through one level of grouping, the codes informed the development of subthemes, while through two levels of grouping the subthemes informed the development of themes. Therefore, the themes and sub-themes were generated from the researcher’s interpretation of the codes through grouping similar items, while the codes were from grouping of similar quotes and statistics obtained from the two qualitative studies and one survey respectively. Accordingly, the texts provided under themes and sub-themes provides background information sign posting for the oncoming codes, consequently it is devoid of participants’ quotes and/or survey statistics since

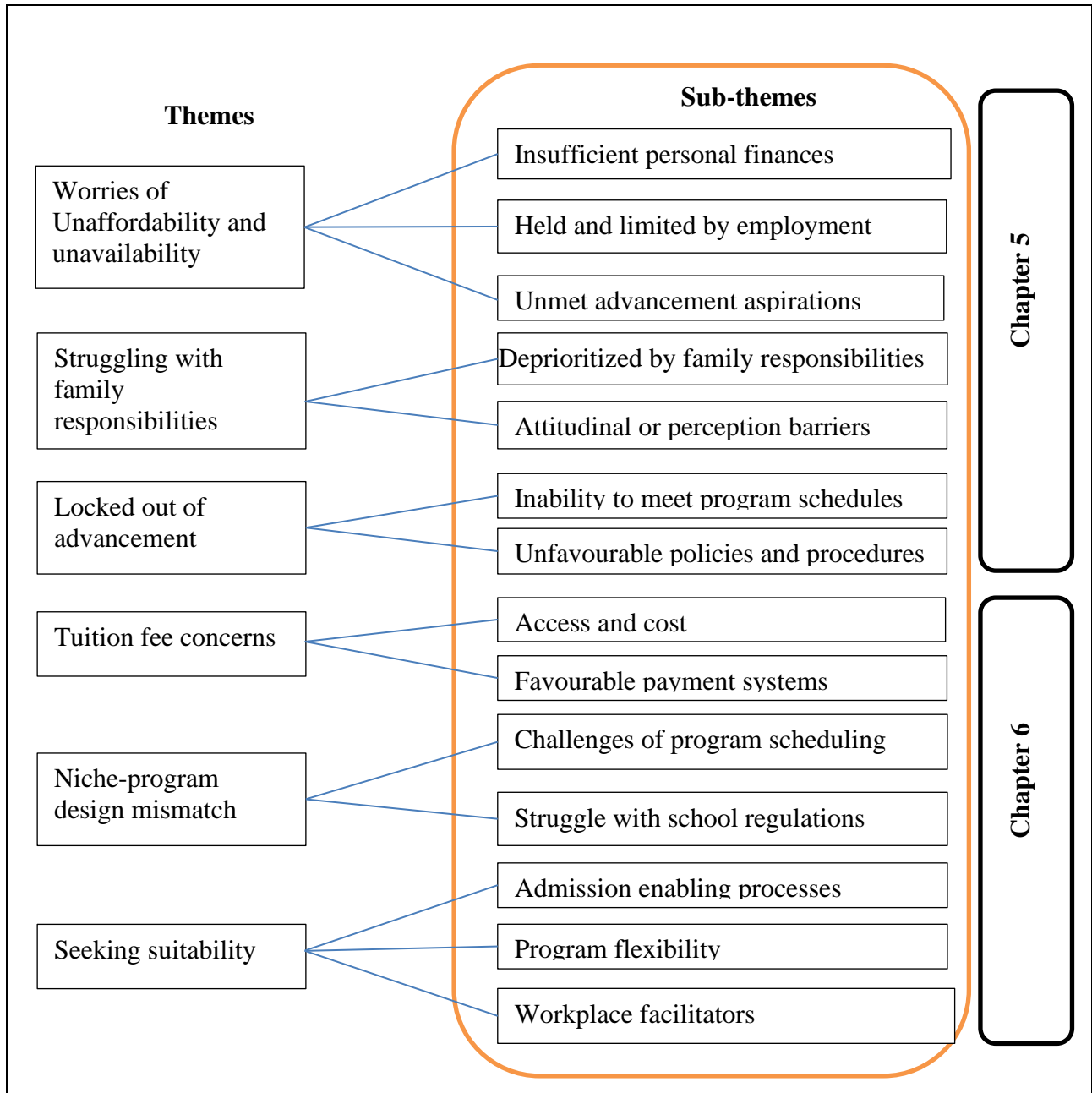
they are largely the researcher’s interpretation of participants’ grouped data presented under the codes (Creswell, 2014; Merriam & Tisdell, 2015). Therefore, the data (quotes and statistical data) are only provided at the code level. Figure 10 provides a diagrammatic illustration of the results presentation structure in the next sections, while figure 11 shows the themes and subthemes across the two chapters.

Figure 10: Results presentation structure



The quotes and statistics utilised in the data column are all listed in the quote reference table (appendix 24) and the statistics reference table (appendix 25). In total the data in the themes is 123 quotes and 35 statistics. These represent the data used in the themes and excludes the data in other sections such as the demographics section.

Figure 11: Themes and subthemes across the two results chapters



5.6 EN experiences and aspirations

The overarching theme in this section focuses on the EN experiences and aspirations towards educational advancement. The results are integrated from all three methods (FGD, survey and interview), enabling the presentation of both similar and contrasting findings to

demonstrate depth and breadth of understanding, an advantage of the mixed methods. Consequently, the data included in the themes and sub-themes was largely qualitative.

The emergent themes were threefold and included: Worries of unaffordability and unavailability; Struggling with family responsibilities; and feeling Locked out of advancement. The themes and their subthemes (Figure 11) raised important issues, highlighting new knowledge, extending what we already know as well as confirming existing knowledge from the current literature including the Cross' COR model. While all the themes and subthemes that emerged could somehow fit in the COR model, there was some variation and new learning making a reorganisation possible to better suit the context. For example, while financial, family, and personal concerns were classified under the situational category/theme in the COR model, in this study these were extrapolated as independent categories/domains, because they were so 'loud' and highly expressed. These are discussed in chapter seven. The full display of all the integrated themes, subthemes and codes is provided as appendix 26. The objective for phase one, to explore experiences, aspirations and needs of ENs in Uganda with respect to advancing their nursing careers was largely addressed in this chapter.

5.6.1 Worries of unaffordability and unavailability

ENs were worried about their capacity to afford educational advancement and had time constraints indicating that they were unavailable to undertake advancement studies resulting in unmet advancement aspirations. The theme was supported by three subthemes of Insufficient personal finances; Held and limited by employment; and Unmet advancement aspirations.

5.6.1.1 Insufficient personal finances

ENs had insufficient financial resources to meet their advancement aspirations and were constantly worried about how to find a solution. This was supported by two codes of Low Salary and Saving difficulties.

5.6.1.1.1 Low salary

ENs were aware and constantly expressed that they were least remunerated earning low salaries that could not support their advancement aspirations. They expressed that their EN qualification limited their earning rate at work, as these ENs expressed with dissatisfaction.

“...we enrolled nurses, we are paid the least ...very low salary.” (EN4, Central FGD)

It was also noted that those who worked in low level private settings did not even always get their full salary, hence the ENs not only perceived the remuneration as low, but in addition, some employers in low level private settings did not pay them full amount, as this EN decried.

“...on that still goes back to the institutions where we are working, you may not even get full salarySo you see the challenges that the nurses face.... so you may not be paid full salary and yet your salary is even below the margin, so how are we to meet school costs....” (EN3, Central FGD)

ENs constantly compared their remuneration to that of RNs and shared that RNs were paid much more, almost doubling their own EN salaries, even when they did similar work, as this EN expressed with frustration.

“The difference is too big and yet we do the same work... that they're supervisors!”
(EN6, Central FGD.)

And

“...these days we are seeing that the registered nurses, their salary is higher than us...It is almost doubling ours....” (EN5, Western FGD)

It was not all frustration as some ENs took the salary difference as a motivation to advance...as this EN shared the benefits:

“The experience like as we told you at the beginning...our hearts cannot be satisfied because you feel when you go for registration, one thing, the salary is increased, it also helps you as you help your family.” (EN5, Western FGD)

Results from the survey supported this finding of low salary of ENs and inability to support their advancement. When all the perceived barriers were hierarchically ordered they showed that insufficient income and personal finances (79.6%) was the second leading barrier, hence limited their capacity to finance their aspirations for educational advancement.

This was also confirmed by the principals as they revealed that EN advancement students did not complete tuition payment in time and sometimes not at all, hence completing their study program while owing schools a lot of money and leaving schools in debt, as this principal explained.

“Out of the 35 students who finished last year, only about 20 had completed the tuition. Up to now, the other students are still owing the school a lot of money.” (Principal 1)

5.6.1.1.2 Saving difficulties

The possibility for them to save and then finance their education later without relying on study leave or scholarships was neither realistic nor practical. ENs expressed that ENs were paid the least and the remuneration was not aligned with their responsibilities, therefore saving for school or anything tangible, was very difficult as these ENs shared their challenge.

“... we enrolled nurses we are paid the least despite the work we do... so to save becomes very difficult in our economy right now....” (EN4, Central FGD).

And

“Many problems, because I may be saving my money like now for me to go to school, and then you get a problem, your mum gets sick and you get your money and pay for the hospital fees..., and again the child is sick, from there then the sister is sick, you end up when again the other year you are not going [to school], then you say let me start saving afresh.” (EN8, Eastern FGD).

And

“It is difficult to save. Okay, to me, the other thing that they are talking about starting up a business or starting up a farm, the money we are earning is too small, it can cater only for yourself and the dependents and it is finished.” (EN5, Northern FGD).

This was validated from the survey as information on the ENs’ earnings showed the median monthly income from their main jobs to have been UGX 500,000 [about 130 US dollars]. Considering this very low income of ENs, it can be understood why unaffordability was raised, and therefore why saving to finance their education was not considered as an option.

5.6.1.2 Held and limited by employment

Another subtheme to exemplify the theme of Worries of unaffordability and unavailability was ‘Held and limited by employment’. While employment was seen as an income opportunity, it was also seen to limit educational advancement as it held the ENs without releasing them to undertake their educational advancement aspirations. This was supported by three subthemes of Workplaces unsupportive of advancement; Disfavour within the working environment; and Chronic night shifts & Risky arrangements.

5.6.1.2.1 Workplaces unsupportive of advancement

It emerged that the workplace was a key factor in limiting or enabling achievement of ENs educational advancement aspirations. ENs shared experiences of their challenges revealing that their work-based supervisors were not supportive for their educational advancement aspirations, hence leading to non-advancement and frustration. For example, it was revealed that there was a risk of termination from work if they endeavoured to start the advancement journey. Consequently, ENs lived with the fear that once they start school, then the employer could replace them. Accordingly, ENs felt that their employers/supervisors were unsupportive and requested them to be supportive, as these ENs requested:

“I think our employers should be flexible...They should embrace the idea. ... they should also advise us, ... they should be supportive, they should support us to go back to school, not just talking ...” (EN3 Central FGD)

And

“I want support from the supervisor...the in charge, ..., ...” (EN3 Eastern FGD)

However, there were some supervisors that were supportive, even though the outcome was not necessarily positive.

“Yes, there has been some good moments like with me, the in charge at the facility, when I told him about my plan of going to school, he supported and even when I picked my admission from school, then I wrote my request for study leave with pay, he forwarded it easily without any complain, but now I became stuck from there [the study leave was not approved by higher authorities]...” (EN1 Northern FGD)

The principals expressed that this was more likely to happen to those ENs working with private healthcare facilities, as this principal explained,

“Unfortunately, the category of those ones in the private sector...because in the private sector when you talk about going back to school, they terminate you. ... what they do [ENs] is that they plan early such that they begin saving...by the time they come to school, they have some money to cater for their tuition and other needs.” (Principal 2)

However, in the survey of barriers the issue of unsupportive work-based supervisors for career advancement was not strongly supported as the result was not significant having scored only 39.1%, suggesting that ENs felt that this was not a strong barrier. Although the majority

didn't see it as a barrier, they reported needing it as a facilitator (72.8%). Other workplace barriers are summarised in table 30 and point to workplace arrangements that are unsupportive of educational advancement. However, they also scored below the 50% mark, and this could be attributed to the limitation of the method, not being able to seek clarifications.

Table 30: Workplace Barriers

Barrier	Mean score %
<i>Lack of paid study leave from job</i>	45.5
<i>Lack of flexible work schedule from employer</i>	40.5
<i>Understaffing at workplace</i>	40.3
<i>Unsupportive work-based supervisor or employer for career advancement</i>	39.1
<i>Ban on career advancement imposed by district or employer</i>	29.7

From the table 30, the workplace was also a source of EN educational advancement barriers. The barriers included Lack of paid study leave from job; Lack of flexible work schedule from employer; Understaffing at workplace; Unsupportive work-based supervisor or employer for career advancement; and ban on career advancement imposed by district or employer.

Another area in which ENs felt unsupported at the workplace was when they were seeking paid study leave. It was revealed that it was a very hierarchical and difficult process that involved a lot of waiting and patience to navigate, ENs in the North particularly struggled.

“This is my sixth year of work ,... I tried to apply to get full time study leave with pay, I was supposed to be in school by 1st of next July (meaning July 2019), but I have failed to get it.” (EN1, Northern FGD).

And

“I have not had a good experience because within these six years of working experience, I have been undergoing a lot of challenges. There is too much work, no motivation..., you

want to go to school but they don't allow you. Because we thought, if you have that long time of working experience, we have some sponsorship at the district, and we thought the district could allow some few staff to go for a study leave and the sponsorship. But we have not seen it.” (EN6, Northern FGD)

And

“...getting study leave is not easy, because you might be like three in a facility, you all want to go back for further studies, so they can't give the three of you, they have to give one person.” (EN4, Eastern FGD)

And

“Me I will be still having a certificate [in the next five years], ...they can't give me a study leave.” (EN10, Western FGD)

5.6.1.2.2 Disfavour within the working environment

ENs felt that they were treated by their supervisors and employers in a condescending manner. They felt mishandled and unwanted within the working environment. This EN described the work-based arrangements that discriminated ENs from the forefront of the caring role especially in private facilities as follows:

“... ah! Enrolled nurses are not allowed to do the real nursing care ..., we are given selected work, other things (being with patients) you don't do.” (EN7, Central FGD)

They also reported that in some hospitals they were phasing out enrolled nurses and were no longer employing new ENs while those who were already employed were assigned nonclinical responsibilities, as this EN explained with disappointment.

“...they no longer employ enrolled nurses at our hospital...And for us who are there, they try to put us like behind the scenes, be like at computer, they give you run around work...That is why we push on for school ...” (EN7, Western FGD)

5.6.1.2.3 Risky chronic night shift arrangements

As a result of difficulties with study leave application some ENs decided to make their own arrangements that met the need. There were various options they considered such as working ‘chronic nights’; engaging someone to take on their duties; and doing what they termed as ‘internal arrangement’. This ‘internal arrangement’ as they called it, was made at the facility level and not declared to the facility supervisors, as this EN explained.

“...because getting study leave is difficult, that is the internal arrangement we have been talking about ..., if I can go through [to get admission], I can make it [the internal arrangement] ... It is like this, I will be at school, from Monday to Thursday, and then am going to be out on Friday, Saturday, and Sunday. Yeah! Then I go back to school on Monday morning.” (EN5, Eastern FGD).

However, there were challenges with implementing this arrangement, for example when the person who finished school was transferred to another facility, it was considered a loss. ENs felt that they were not being supported and had to find solutions at whatever cost, consequently seeking risky solutions that could be unethical. Further, if someone was about to go to school and they were transferred, it was also considered a loss, because the new facility would put them at the end of the ranking list or queue, hence being unable to utilise the admission, as this EN explained.

“...by the time I wanted to go [to school] we were three in the unit [workplace] and one was already there [at school on internal arrangement], and the other one was also hoping to go in the other[following] year and for me I was waiting..., I was then

transferred and taken to another health facility where I found people who were already there [school] so I could not go.” (EN3, Eastern FGD).

And

“There is one who I covered, after covering her, she finished, they transferred her, am there, now I wanted this one to cover me but” (EN5, Eastern FGD).

And

“If you are not cooperative with your fellow staffs to make internal arrangements, it will affect your planning to go to school.” (EN5, Eastern FGD).

This arrangement also had implications for repeatedly missing some school days , particularly where someone had to come back to the workplace and be available in person for key meetings, special duties, head counting, or when the internal arrangement did not cover the five study days of the week. If the internal arrangement did not cover the five study days, then the EN-RN student had to select a day to recurrently miss school and be at her duty station to cover their duties, as this EN explained.

“It is like this, I will be at school, from Monday to Thursday, ... then am going to be out on Friday, Saturday, Sunday. Yeah! Then I go back on Monday morning...”
(EN10, Eastern FGD).

The woes with paid study leave seemed difficult to sort as the demand outweighed its supply, yet everyone who thought of educational advancement wanted to get a paid study leave. But these study positions seemed to be very limited, yet those who wanted them were much more. Therefore, it called for new solutions to be sought, as this EN explained.

“To supplement or give more light or information about study leave, ...what I realized, it is not easy to get it, that is why people just sacrifice their lives to go as a private thing, they work, at the same time they study. For example, me am in OPD causality, it is a very busy place... we are only five people working there, and they want the three shifts to be covered, ... So you find like if you ...want to study, they will not grant you study leave. my two colleagues who are studying, whom we are working with, they are doing their private arrangement, they are working nights or evenings as they balance their studies. So, it is a bit challenging to access a study leave.” (EN10, Western FGD).

Results from the survey of the preferred flexible study program arrangements and designs supported this finding as they showed that the second most preferred design of EN-RN education, whether or not the EN was given study leave was “*full-time with chronic night duty shifts*” (24.6%), which is a derivative of the students’ risky internal arrangement. And without study leave, again the second most preferred design was the “*full-time with chronic night duty shifts*” (20.9%). The ‘internal arrangement’ and the ‘chronic night duty shift’ were both risky initiatives and consequential developments of the challenges in accessing study leave.

From the interviews the principals revealed and confirmed that these EN-RN students were challenged by the need to balance work and school, because the programs were not designed to support both. Those ENs who did not access study leave often found themselves having to make tough decisions and ended up taking risky arrangements such as not disclosing their schooling to their workplace authorities. This often led them to engage other ENs to work their shifts; themselves working chronic night shifts; and faking sickness to attend school. Below quotes elucidate these risky arrangements.

Working chronic night shifts

“I have seen a good number do night duty; so they do like chronic night shifts.”
(Principal 6).

Engaging a stand-in person

“... what they normally do is to identify people to stand in for them and then they pay them so that they don't lose their jobs.” (Principal 8)

Non-disclosure at workplace

“Ha...we don't get into it that much, but we get to know it like halfway through the training. Like for some of them, in terms of employment, their bosses have no idea they are studying while working [laughs]. A good number [of the employers] actually do not know that their ENs are studying, and that is one of the biggest challenges when it comes to this group – lack of disclosure at workplaces.” (Principal 6)

5.6.1.3 Unmet advancement aspirations

The third and last subtheme to support the theme of Worries of unaffordability and unavailability was that of unmet advancement aspirations. This highlighted the fact that ENs aspired to advance to the RN but their aspirations remained unmet. It was supported by two codes of Strong advancement aspirations and Failed advancement attempts.

5.6.1.3.1 Strong advancement aspirations

The Strong advancement aspirations code highlighted the reality that ENs desired to advance to the RN or higher and that this was a key career goal. ENs had a strong desire for educational advancement, and this was evident in all the FGDs. Even when they had challenges, the dream to upgrade or advance was still much alive in their discussions. They all had the dream to advance to the RN level and were passionate about it. They talked about it with excitement and associated it with successes pointing to a better income, better working conditions, change of uniforms and much more. It was their deep-seated heart's desire and they hoped to pursue it one day. The aspiration to advance to the RN was so strong that at some point they sounded desperate and frustrated as an important career goal was not coming to fruition, as this EN expressed their dissatisfaction and desperation.

“The experience like as we told you at the beginning, ... my heart cannot be satisfied because you feel when you go for registration,... the salary is increased, it also helps you as you help your family. Then again, even the uniform changes, you know sometimes you go in a meeting and you find that you are the only person with pink, even here in the hospital... So, it remains hurting in your heart that if I had upgraded I would even have changed my uniform and even the belt.” (EN5, Western region, FGD)

ENs had the aspiration and desire to advance their career to the RN level, as this EN shared

“I would also want to upgrade, like I said earlier, I would also wish to upgrade to registration level, ...given an opportunity, I would go and upgrade, to registration level in nursing.” (EN5, Western FGD).

From the survey, majority of ENs 84.4% (n=357) reported aspiring for career advancement to the registered nursing (RN) level. The median duration of their aspiring to advance was 3 years, while about 10% of them had lived with the consideration for 8 years or longer.

Others had their hopes even beyond the RN level, even though they were still enrolled, as this EN expressed their ambitions and hope to reach the PhD.

“Ah..., I hope to upgrade to registration, diploma in nursing..... I hope to advance to a PhD in nursing.” (EN2, Central FGD)

5.6.1.3.1 Failed advancement attempts

This was the last code in the Unmet advancement aspirations sub-theme and it highlighted the downside as ENs attempted to advance but failed to make progress desperately leaving them with unmet aspirations, as this EN shared her frustration and hope.

“I have been an enrolled nurse in a PNEP, I want to upgrade not just by word, I have tried several times, this is my third year of doing interviews, I have passed the interviews but now the problem is, financial problem.so, there is that feeling that I should upgrade one time. So am still in the process of trying.” EN2, Northern FGD)

Others felt desperate to the point of wanting to leave the profession and crossover to something else hoping that they would somehow make it there. They expressed that they had tried to advance but it wasn't possible, yet the hospitals were quietly phasing them out, as this EN bemoaned.

“..., am so willing but the challenge is with the money, you look here and there, and you feel stranded, you feel like you want to quit the profession and do other things because you find that staying an enrolled nurse is challenging ... Because these hospitals ... they are phasing us out indirectly.” (EN6, Central FGD)

Another EN poignantly explained with desperation the difficulties that held him to Enrolled Nursing, after failing to quit:

“I wanted to change the course... I wanted to go for dental... I went to... university and even got an admission.... but things were hard.” (EN8, Western FGD)

About 80% of the ENs in the survey had completed the enrolment training in the period of 2010-2016, but only about 10% (n=41) had acquired additional trainings lasting at least one year or more. Of these (n=41), majority (70.7%, n=29) reported to have done diploma in clinical medicine (figure 9 under demographics section). The other trainings included health related courses like public health (n=4), midwifery (n=2), health management (n=1), and pharmacy (n=1). Others had ventured into non-health related courses like discipleship and evangelism (n=2), the armed forces [UPDF] (n=1), and law (n=1).

5.6.2 Struggling with family responsibilities

The second theme was Struggling with family responsibilities highlighting the ENs individual and family experiences that influenced their educational advancement to the RN. The theme was supported by two subthemes of Deprioritized by family responsibilities and Attitudinal or perception barriers.

5.6.2.1 Deprioritized by family responsibilities

This subtheme revealed the family experiences that influenced ENs decisions for seeking educational advancement. The family was at the centre of the educational advancement discussion and was an important consideration. While the family was always seen as a source of support and comfort, in the FGDs it was noted that starting a family was a limiting factor to their educational advancement. For many ENs, family meant having children, spouse, and other relatives, in that order. This subtheme was supported by three codes including Child-care and support; Spouse: protagonist or antagonist; and Stretched by extended family roles.

5.6.2.1.1 Child-care and support

Children were often competing with ENs' education resources including time and finances among others, and that the ENs often surrendered their resources to their children. The ENs educational advancement aspirations, tended to be deprioritized with children taking the upper hand, even when it was the ENs making the choices. The ENs who were parents made sacrificial choices to support their children and wait themselves, causing them to park their educational advancement aspirations, as ENs described the competing demands:

“... me I have never tried because of the environment or the life I was in. I couldn't attempt to even go and look for an admission because caring for four children is not easy and now the two are in secondary [school] and they pay a lot of money..., so I had just to put it aside and my dreams were just focused at my children... that maybe, where I did not reach, let them reach.” (EN10, Western FGD)

And

“... , like I said earlier, I would also wish to upgrade to registration level, but all the money goes to my children. I thought if I go to study, my children will not get school fees, so my priority was that (of children). If I get salary, it is always used to pay for my children school fees. I have three of them, am the one who supports them.” (EN5, Western FGD)

And they also argued that the size of family mattered and that large families could also be a hindrance.

“... that has made a challenge to me, ... I would have gone to school sometime back, ... I would be the first to go, but the problem is that big family, you see when you have a family of your own, these are your children...and I am a single parent, you can't leave them out.” (EN6, Northern FGD).

The majority of the ENs responding to the survey 78% (n=329) had children, the median number of biological children was two (2). Consequently, 38.9% of ENs saw the requirement to take care of children limited or delayed the ENs chances of pursuing educational advancement to the RN.

The principals also indicated that childcare influenced ENs educational advancement opportunities and pointed to various reasons including parenting commitments or caring for sick children which could not allow ENs to advance freely. It emerged that the parenting commitments were linked to care of young children, schooling children and even pregnancy.

“...the majority are already having babies or have children. ...then there are some few who come ... being overwhelmed with family demands. But majority have children. At least you see them come to ask for permissions like “my child is sick”, “I have to go to my child’s school”, “I have to take my children back to school before I come back for the semester”, and others like that.” (Principal 4)

And

“Our policy is that if a student gets pregnant... and reports or we identify it, we temporarily terminate her training, and she goes home, carries the pregnancy up to term, delivers, breastfeeds the baby for six months, and then comes back ... and apply a fresh to continue. ...” (Principal 7)

5.6.2.1.2 Spouse: protagonist or antagonist

The issue of spouse also surfaced, and spouses were seen as protagonists or antagonists depending on how their influence was perceived. ENs expressed that they had difficult spousal experiences and concerns that were limiting their educational advancement. ENs who were majorly female shared that spouses (husbands) wanted time with them which hindered their schooling, especially that the education programs were full-time and residential. Further, they expressed that their spouses had to consent for educational advancement, as this EN described her lack of autonomy over such matters:

“...I may not be the only one deciding, the husband may also decide with me, okay I may say that I want to go this year and he may refuse, and it becomes very hard... it is really very hard for us especially women because at home the husband needs services, ...so it makes it hard for you....” (EN1, Northern FGD)

And

“Sometimes the husbands may tell you other programs and say you will go next year or the other year.” (EN4, Eastern FGD)

And

“Yes, [the spouse can decide for you] and say that my wife, first wait, I finish first then you will go next year.” (EN4, Eastern FGD)

And

“...I really agree that they should at least consider those people who have engaged themselves in marriage, and they are carrying out marriage responsibilities, they need to upgrade truly but they have some, or a lot of hindrances actually...Caring for the ... husband.” (EN4, Western FGD)

It was also expressed that the spousal involvement in decision-making should be two way as this EN expressed.

“For me I just wanted to say that actually the decision of the spouse is very important, for them [FGD colleagues] they are saying especially for the women [to seek consent], but even the man, because now you [the man] need to talk to her, to make sure that even when you [man] are at school for example you’re going for a full time program, you have to inform her so that she knows it.” (EN7, Northern FGD)

Consequently, one felt that spousal issues were stressing and should be delayed until one has finished advancement.

“I also have my plans, I didn't want to go to school with many responsibilities, I said let me first go back for my upgrading before I get responsibilities of ... husband and that stress.” (EN8, Eastern FGD)

From the survey the majority of these ENs 65.9% were married or living with a spouse and hence had some form of spousal commitment, and potentially another approval level to navigate in seeking permission to access education. When spouses were supportive, ENs perceived them as facilitators, and they sought financial or material support from them (76.0% n= 314) and encouragement (74.5% n=302).

Some schools demanded letters of recommendation/approval from spouses (see principal quote later), a practice that was seen as reinforcing the locus of control from ENs concerning matters of their own educational advancement. This requirement to provide a recommendation letter from the spouse was not seen as facilitative by ENs, much as the school perceived it important. Some of these spouse recommendation letters seemed to be challenging for the ENs to find hence unsuitable. ENs expressed being uncomfortable with this requirement and noted that it was unrealistic and unsuitable considering that the ENs were independent adults, yet this edged towards eroding their independence in making career advancement decisions. The quote below exemplifies this requirement.

“...We require acceptance letters, as stipulated in the admission letter, that someone has been accepted [allowed] to go for training. Either the spouse writes or the parent writes, and they are aware that he/she [the student] is at school; so, we have that as a requirement item on the admission letter. Most of them have the letter of permission from a spouse. Like in that class of 30, I think it’s like only five (5) or four (4) who are not married yet.” (Principal 5)

Difficulties in spousal relationships was associated with challenges that ENs struggled with that led to their failure to enrol or even dropping out of the RN program. Some ENs were challenged right from the beginning, and they did not even start the program as challenges of program suitability became vivid and insurmountable, while others began the program but soon dropped out. The principals pointed to various reasons including relationship issues which usually involved spouse issues. The spouse issues were further dissected pointing to inability to access spouse support and spouse displeasure of not sleeping at home particularly for residential programs. For those who did not access spouse support, it was related to the fear by male spouse to be overtaken educationally and plain refusal by spouse to allow their EN wife to advance. The principals shared that when spouses supported their EN partners to advance, this support provided some degree of facilitative success-mileage or push to the EN. This quote brings out the spouse issues that principals were able to share.

“...there are some ENs who come and say they have issues with their spouses..., that they [spouses] don't want them to upgrade. So some of them have failed to start or they dropped out during the course of the study, or some of them have remained with a lot of fees [debts] for the school because of lack of support.” (Principal 1)

5.6.2.1.3 Stretched by extended family roles

ENs expressed that part of the family limitations that stretched them came from the roles ENs played in the extended family network, and that this was a heavy responsibility while limiting their opportunities of advancement to RN. These included roles such as healthcare giver for the sick including elderly extended family members. It could also extend to financial support of the sick or others who needed financial and material support including fees, as these ENs narrated the stretching duty.

“... For me I have five dependents, my biological brothers and sisters and also my parents. I also have two children, when I add on those five, they make it seven,... and this little brother of mine, I had to pay for him right from primary to secondary. Some of them are in tertiary institutions now. I am the second born...The first born did not go to school, I am the only person earning in the family. So I have a lot of difficulties running those family operations, making sure those people are in school...” (EN6, Northern FGD)

And

“Many problems, because I may be saving my money like now for me to go to school, and then you get a problem, your mum gets sick and you get your money and pay for the hospital fees, you end up again cutting your money, ... then the sister is sick, you end up when again the other year you are not going [to school], then you say let me start saving afresh.” (EN1, Eastern FGD)

And

“By the way it is true, because like us who are from villages, a man and/or a lady [parent/s] struggles to pay for you school fees when you're the first born of seven, they say let me pay for this one to become a nurse, then the followers will be on your head. He sells everything, he sells the land, he sells cows, then the followers all of them want you to pay for them, because there is nothing there [left] at home.” (EN3, Eastern FGD)

One EN described her problem as the extended family, she noted:

“My biggest problem is the extended family...dependents.” (EN9, Central FGD)

Another EN had wanted to seek advancement wherever she could get it, but was limited in choice, tied to near-places only, due to extended family commitments, yet these near places of advancement were non-existent, hence failing to advance, as she narrated.

“... I wanted within here, a nearby institution, because I have to get somethings for myself, I have to take care of my mum and I have also to pay my tuition...” (EN5, Central FGD)

An EN, who was a double orphan explained how she was caught up between her aspirations and huge extended family obligations, consequently failing to advance:

“It is in my heart and even I tried to do it (advance) for many years because I tried to go back but I failed. I'm renting, have children ...I have my young sisters that I support, yet I'm a double orphan. Am the elder sister, so I look after my parent's family and my family..... I have two children and from my parent's family they are four.” (EN10, Western FGD)

Survey results indicated that the majority of ENs 77.5% (n= 328) were staying with additional dependants who, in turn, chiefly comprised of siblings (62.3%) and about a third (37.5%) being parents as dependants. The Median number of dependants staying with ENs was 2 (IQR=1-3).

5.6.2.2 Attitudinal or perception barriers

Barriers highlighted the suitability issues or challenges related to the attitudes and perceptions that ENs held. The subtheme was supported by three codes that included Age and Seasonality of advancement; In a hurry to finish; and Want special treatment.

5.6.2.2.1 Age and seasonality of advancement

ENs felt that there was a time/season in their lives perceived as the most appropriate for them to advance, and one that was not. They described this time/season as one when they had the least distractors and most enablers. They also connected it to the season of their lives when they had just completed EN training, arguing that advancement should be done when one is still young, energetic and still having the urge to go back to school. They shared their experiences and indicated that ENs ought to advance to the RN before committing to relationships, family responsibilities and childbearing, as they argued that these limited their advancement opportunities. They shared that these commitments consumed vital resources for advancement such as time and finances hence distracted their advancement plans. They advised that if one were to advance, he/she should do so earlier, before thinking about spousal relationships (marriage), family and children, as this EN revealed.

“Now you are attending to your books, then the children? ... Most especially school going children ... You know, going to school is not so easy... and look at a time when you want to put in your application, you are breast feeding. That is why I put it earlier that, fresh from school, shorter time, and go back to school.” (EN4, Central FGD)

They re-echoed that the best time or season for them to advance was soon after they finished their first EN qualification. They also advised that there shouldn't be time wasted in waiting for the two years, because according to their experience, which was when they got into family complexities. They also argued that sometimes opportunities began to evade them as they grew older, preferring younger nurses than older ones, as this EN revealed.

“...my experience is that before I got this job, I was trying to buy newspapers, looking for information on scholarships..., for nurses, they would only consider nurses below the age of forty-five years...” (EN10, Central FGD)

And there was an age perceived to be old for school, when the focus changed from educational advancement to retirement planning, as this EN questioned:

“Yes, even age. If someone is fifty and has been enrolled nurse ..., now I have made fifty, why stress myself that am going to advance...when I’m about to retire?” (EN10, Eastern FGD)

The principals indicated that advanced age was a challenge to pursuing the EN advancement program and that it was not suitable for the older candidates as they struggled through the program, suggesting that it was better for them to return to school earlier than later. It also emerged that the older candidates had significantly reduced from the enrolments. However, they did share that those older ENs would struggle to cope with learning as this Principal narrated,

“... we really get very few old people. I remember last year we had one lady who was really old, at around 50 years old. But she failed to cope up with the examination, and we discontinued her from the program.” (Principal 1)

And

“... others get challenges with educational [performance] – especially those who take quite long without coming back for upgrading...Yes, I have seen a number of them suggesting that they are too old to join the young ones back in school, ...But indeed when someone has outgrown [laughs], going back to school may be a challenge – first of all, competing with the younger ones and even the process of learning itself.” (Principal 4)

And it was also noted that they struggled with program rigors especially their concentration skills, writing skills and technological skills were not up to standard and were a challenge. It was noted that they preferred to plan for their retirement than returning to advance their career to RN, as this principal shared,

“... we used to have some of those in their 40’s in class, but their concentration was a bit low plus even their style of writing and the English language itself ... I mean they had their own challenges, and so it may be difficult for them. Then also with the introduction of computer technology, there is much fear especially among those who are of advanced age. When you talk about computer, they get perturbed. So it might be that because of some of these factors, some of them [the older ENs] choose not to go back to school. And also, those who are approaching 60 years, they may perceive themselves approaching retirement and thus not benefiting much from the training. That may hold them back.”

(Principal 2)

Nevertheless, there was some positivity to the age discussion too, acknowledging that the older ENs had a wealth of experience and easily shared their experiences with the younger ones, as this principal put it.

“Among the pioneers was one lady who was about 48 years doing the diploma program and she was fitting very well in the class. And such students are normally rich in work experiences, so they normally help the young ones.” (Principal 8)

5.6.2.2.2 In a hurry to finish

It was also noted that these ENs were always in a hurry to finish, it was as though they were late for something, hence running fast to catch-up, and this could affect their learning styles and concentration, as they just wanted to have the program finished. The reason for this was not clear, however, pointers may lead to the program schedule that may be unfavourable. As these principals explained.

“So, we tend to be very strict on class attendance; and they feel we are very strict on them. For them they feel that when they sit the exams and pass them, that is enough. But for us we say it is not about passing exams, it’s about shaping the right knowledge, attitude and competencies; so, you are required to be in class to get that.” (Principal 8).

And

“Those ones are the ones I am saying they are like “give me the paper and I go”. ...with a thinking that “you are not adding anything to me; I just need the paper and I go”. Actually, the ones I have are on our cases to hurry up and give them their papers because promotion time has reached.” (Principal 6)

This hurriedness to finish makes the students not appreciate key concepts as their target is not necessary learning but completing.

5.6.2.2.3 Special treatment

It was also noted that the ENs demanded special treatment in consideration of their level, it felt as if the students did not want to exchange their working ranks with the new rank of student. They wanted to be held in special ways and they wanted to always have their way, as these principals explained.

“... some of them come when they have been the ones running the health centres and the like, so they come as bosses [laughs] – and that’s where there’s a big issue also. So, when they come as bosses they feel like their teachers are below them in terms of power and authority, and that hinders many of them because they feel like they deserve to be respected in a special way... I think they just want a certain kind of respect...they feel like, “I can come late and I should be allowed”; “I can be late on my assignment submission and that should be ok because you know I am...” [laughs] – that is the attitude. Then there is this thing of coming when they haven’t moved on from certificate level; they want to be spoon-fed – and that’s one of the biggest issues now.” (Principal 6)

And

“And then you know with adult learners, their attendance of class, they want to come in at their own will or time. They tend to frontier their personal issues first. They will tell you I need to be at the job for head count, etc.” (Principal 7)

As part of the special treatment, it was revealed that these ENs seeking the RN, did not want to learn with the junior pre-service students seeking the EN level, as this principal narrated.

“For example, you might see that the tutor is qualified at a degree level; but you find such a tutor is teaching certificate students. And once in while he/she would like to join a diploma class with the certificate class if they have the same content, but they don’t feel like they can share a class. They don’t want to mix up.” (Principal 7)

5.6.3 Locked out of advancement

The last theme to describe the EN experiences and aspirations was that of ‘Locked out of advancement’ referring to their inability to access suitable educational programs for advancing to the RN. It seemed that their needs were ignored or forgotten as the education systems targeting them were not suited to them, hence the feeling that they were locked out of advancement. Looking at the lack of suitability for programs targeting them indicates how they were not thought about when planning these programs. The lack of suitability in the programs meant to target them was so glaring that one wondered if at all the program was planned for them. The theme was supported by two subthemes of Inability to meet program schedules and Unfavourable policies and procedures.

5.6.3.1 Inability to meet program schedules

This subtheme revealed EN experiences of struggling to join or survive in RN programs that were not scheduled to meet their life circumstances. This subtheme also highlighted the systemic failure to meet needs of ENs for educational advancement. It was supported by three codes including Lack of conveniently scheduled advancement education; Lack of flexible RN programs within physical access; and Small number of schools offering the EN-RN advancement program.

5.6.3.1.1 Lack of conveniently scheduled advancement education

ENs argued that full-time programs were not suited for them and made their educational advancement difficult, if not impossible. They argued that there was no point mandating the full-time programs targeting mature and/or married students to be residential. They desired an open and flexible system that would give students the choice to be residential or not, as this EN explained.

“I really agree that they [school programming] should at least consider those people who have engaged themselves in marriage, and they are carrying out marriage responsibilities...caring for the children and their spouse, they need to upgrade truly but they have a lot of hindrances...so they should have the option for non-residential.” (EN4, Western FGD)

They shared examples of their colleagues who were in other disciplines and mainly in the central region whom they knew to have advanced using flexible education programming such as evening and weekend programs, and they suggested that the same should be extended to them in nursing, as this EN shared.

“That is one example, I have friends, brothers in the central, others have even done evening programs, others have done weekend programs, and we have seen them move on, leaving us where we are ...”. (EN7, Northern FGD).

Knowing their circumstances, ENs were mindful and appreciated that they could work and study, as this EN shared her preference.

“For me I know very well that, we nurses who work either in government or recognized institutions, we do work for only four days in a week. So, a week has seven days. These three days I think we can program for studies, then the other days we do work. There, we can do both working and studying...” (EN10, Central FGD).

From the survey it was reported that up to 40.5% felt that the lack of flexible program convenient for working nurses was a barrier for their advancement.

The lack of conveniently scheduled advancement education was a challenge, as principals noted that ENs could not find programs suitable for them. The schedules were simply unrealistic, illogical, and unsuited for them. This embodied all concerns that ENs experienced or envisioned in their quest for a suitable program for their educational advancement to the RN. It emerged that the experience of going through the current design of the full-time EN-RN advancement program was hectic and taxing. Resonating with the findings from the FGD, even the principals described the experience as challenging.

“I see that it is a challenging experience because they have many other responsibilities on top of being students. ...because you find somebody has multiple issues like they have to care for the family, and they have also to make sure that they secure their jobs. So, meeting all those things is very difficult for them. Sometimes they reach in class and they sleep...” (Principal 1)

Principals expressed disappointment that ENs could not find educational advancement programs aligned to their life circumstances. It was known that ENs were already a different niche of students with work and family commitments, therefore it was strongly argued and expressed that education targeting them ought to be tailor made to their availability and meet their life circumstances, yet, disappointingly, current educational designs were not. They felt let down by the regulatory requirement for programs to be full-time and residential, yet ENs who are the program niche had work and family commitments, as explained by the principal below.

“When we get these students, we interact with them; they tell us their problems and their challenges. But the students we get; their background usually is that they are working class, have families, some with even young families, have full-time jobs. You find them with all these, i.e., they are working, they have families, and their jobs are full-time; others have businesses, etc.” (Principal 3)

5.6.3.1.2 Lack of flexible RN programs within physical access

It was disappointing to note that ENs lacked flexible RN programs near them. Further when they even sought admissions through the joint admissions system, they were admitted to schools far from home. This pointed to the lack of suitability with the practice of admitting students and placing them in schools far away from their home or working places, with the reasoning that because school is far away, so they would stay at school and not come back to work and to their families. This was seen as an unrealistic and unsuitable practice by the centralised admission system as it limited the students' connection with their family or workplace, which were key determinants in the ENs life, as these ENs explained.

“Okay, I’m from Jinja, I would not like to go say like in Kabale [far district], I would like it to be like Kampala [near district], not Bundibugyo or Kitgum [far districts], ...but at least a district from which I can travel like in two hours and I’m home, I can travel back to school on that same day. When the schools are not there [near], ... and it is not in Jinja, it is very far whereby I have a family, I cannot go to Lira [far district].” (EN9, Eastern FGD)

And

“What I wanted to say is, this diploma course, the schools which are taking it are little, they are still few, like in Kabale, we have this one and you may go to do interviews, wanting to go to Kabale [same district], and they put you in Jinja [far district], or they put you in Masaka [far district]’. And you're in Kabale, if you are making your private arrangement you fail, because if you are [admitted], in Masaka, you can't work in Kabale and study in Masaka.” (EN7, Western FGD)

And

“...you get admission, and they post you far away. Yes, for me I was taken to Arua, about 400 kilometres...so it makes you say no, let me wait.” (EN7, Northern FGD)

The principals also confirmed this, as this principal explained.

“We have seen especially that sending students to far schools is a challenge.... Some time ago we had tried to balance the region of origin, but then you find some people are working in central region although they originate from another region like western. So, you find you have decided to select and admit the student to the western region, thinking that these ones should be suitable for this area; but when they reach, they come and request for transfer because the person is working in the central region and so he/she prefers studying in central region schools. ...Other reasons could be family. May be the person has a family... and it could be easier to manage when they study near their family.” (Principal 4)

The issue of admission to schools far from home was sometimes consequential as there were no near options in some areas, hence forcing ENs to seek admission to distant schools or not considering advancement at all, as this principal explained.

“...if an EN wants to join an extension program, you find they are looking at the balance between job and school, and maybe the training institutions are not near. So, it may hinder them from joining.” (Principal 3)

It was argued that schools should open up options for upgrading students near where they work or live, as this EN shared challenges of some learners.

“..... there is a big and great challenge for mothers who go back to upgrade, most especially those who come from very far and have children, I have seen many...whose children fall sick and they have to move away from books [school] and go and look after the children, it is a very, very big challenge.....programs should be near them...” (EN4, Central FGD)

And

“...sometimes kids will fall sick and she will have to come home, because we had students from Gulu [far district]” (EN6, Central FGD)

And

“...another thing is the place, where the school is located. Is it far from the family, from the working place? It should be accessible to home and workplace, because some of us we have families” (EN9, Eastern FGD)

And

“...and at this level, actually most of us already have responsibilities, we are having families, ...[if family needs are not met] you may go to school and you fail to achieve the cause that took you. [instead] of one year or one and a half years, you may take two years or more years.” (EN7, northern FGD)

Results from the survey showed that majority of the ENs 76.1% indicated that they needed support with availability of flexible RN programs within their physical access.

5.6.3.1.3 Small number of schools offering the EN-RN advancement program

ENs also indicated that there were few schools from where they could advance, and these were not easily accessible to everyone who needed their service. Some districts (parts of the country) had no nursing schools with EN advancement programs. Some ENs were simply underserved and unreached when it came to advancement program schools, as this EN articulated the challenges.

“...for us here some of these are not easy, you find like for example ... the nearest school is Lira school of nursing in Lacor, for which you have to move about sixty or seventy kilometres away, and the program is not even favourable because its full-time...” (EN7, Northern FGD)

And

“...the schools which are taking it [EN-RN course] are little, they are still few” (EN7, Western FGD)

And

“...like I said earlier, the schools,... they are few. ...” (EN4, Central FGD)

It also emerged from the interviews with principals that throughout the country there were few nursing schools that had the EN-RN program. Over a long period of time, the programs that were available to support the EN-RN advancement education were very few with the majority having started only recently. For example, in the sample utilised, there was only one program considered an old program i.e., having commenced before the year 2000. This was a challenge in that ENs who wanted to advance (return to school) while continuing to work and staying near home with their families could not manage as the schools were few and far from them. In some districts they had only one advancement school while in others there was none, as this principal shared.

“But also, there are not many diploma [EN-RN] programs around this region. So, around this area, this is the only school that offers a diploma program.” (Principal 4)

And

“... these students who finish at enrolment level would get stuck. ...there are not many diploma [EN-RN] programs around this region. So around this area, this is the only school that offers a diploma [EN-RN] program.” (Principal 3)

5.6.3.2 Unfavourable policies and procedures

This subtheme illuminated those unfavourable policies and procedures that limited EN opportunities for educational advancement to the RN. It was supported by two codes of Difficulty in dealing with admission processes and requirements; and Challenges of relevant clinical experience required.

5.6.3.2.1 Difficulty in dealing with admission processes and requirements

This code brought out difficulties that ENs faced while seeking admission to the RN programs. Some of these involved practices such as requiring letters of recommendation from employers which was difficult and requiring them to deposit commitment fees.

“I have even ever tried to go to school, to upgrade to diploma level, and I even have admission, but the problem is ...the official release from the district, they did not even permit me to go.” (EN6, Northern FGD)

And

“I want to agree with ... as he said. Actually for me one thing that is holding the biggest is permission from the employer, I applied [to school] and even got, but...the release...so I ended up sitting, waiting until I don't know when that promise matures.” (EN7, Northern FGD)

And

“Yes, I'm just adding on her point, ...but then it all gets back to our bosses, you reach that time, you go there and you apply, you tell them please I want to go back to school, then they tell you, what about those who went before you, don't you think they want to study? ... Go back and let the people who came before or the seniors first study then you will be able to study. So some of us would have finished but every year you go, they are like not yet, your elder has not finished yet and there is no way you will go to school without a recommendation..., so every year you keep losing morale.” (EN7, Central FGD)

And

“But what I realized, it is not easy to get it [employer recommendation], that is why people just sacrifice their lives to go as a private thing, they work, at the same time they study. My two colleagues who are studying, whom we are working with, they are doing their private arrangement, they are working nights or evenings as they balance their studies. So it is a bit challenging to access it.” (EN10, Western FGD)

And

“Most of us who are here, we have applied [for employer recommendation letter] and failed. It is not easy, they may tell you wait for the next financial year, and then ... they

tell you, you are not successful,.. wait for next year, next year again they tell you that same....., so they don't allow you to go.’’ (EN2, Northern FGD)

And

“I was supposed to go last year because I put 2018, the other year, ... I have ever gone to the office [responsible]. He said you first get the admission letter, then you come ... have some reservations, ...I’m not very sure it will come but at least I have tried my level best. I went there, I talked to him and he promised.’’ (EN3, Eastern FGD)

And going to school without the employers recommendation was a disciplinary matter.

“... now when you go to school without any release [employer recommendation], you go by force on your own, then they call you back for disciplinary action.’’ (EN1, Northern FGD)

The recommendation letters were sought at various stages of the admission process and it was a serious matter that without them the consequences were dire, such as this principal explained.

“When we advertise, it is clear ... the person has to attach a recommendation letter from their employer. So if you don’t have those ones, of course, you are kicked out ... Even the interview panel cannot interview you because you do not meet the [selection] criteria.”
(Principal 2)

Since some employers were not paying their EN’s school fees, ENs wondered why they were being forced to get letters from them. Due to the challenges in seeking these recommendation letters, it seemed some ENs just resorted to manage the matter in their own ways, some of which were unethical, and which could result in challenging student experiences, as this principal put it.

“...and we have found out that some forge their recommendation letters. There are pre-entry interviews, and it is a requirement that your boss gives you recommendation letter allowing you to go for further studies. So, they concoct recommendation letters such that when they come, they are able to study while working at the same time, but in hiding. So, it may challenge their educational performance as well as their workplace performance – because if you are not stable at work and you are equally not stable in class, it can affect the performance.” (Principal 4)

Commitment fee

Schools had implemented the practice of charging a commitment fee before ENs could take their admission letters. Schools charged different amounts, and this varied between about 10% of tuition to about 80% of the tuition. Luckily, several schools had this commitment fees as part of their tuition, so it was not entirely lost. The challenge here was that in case the student had not yet mobilised these financial resources, then it became a hindrance to get the admission letter, which was a vital document in negotiating permission from the employer or for processing study loans. So, while they were expected to start preparing for school, they could not access a vital document that they needed to use in these preparations. ENs struggled to meet this commitment fee requirement, as this EN narrated.

“Some of the enrolled nurses are single parents so according to our economy now, paying your two point something (commitment fee) and again paying school fees for three people which is one point for every child, you find that it is a challenge.” (EN8, Central FGD)

And

“It has not been good because some of us are willing to apply for government loans but the only way to go there is when you have an admission and getting that admission you have to first pay money [commitment fee], yet even this side where you are going, you are not sure if you'll get it. So if they could give us that admission, maybe free or fifty [fifty thousand], that one is affordable...” (EN10, Central FGD)

And

“But it [commitment fee] is too much. Not a fair approach, [school should] let me pick my admission, allow me a chance... But the money is much.” (EN2, Central FGD)

And

“Yes, because I remember they gave us [got admitted] and we were called and told that you have been given two weeks to produce eight hundred and fifty thousand [commitment fee], so if you have given me two weeks and I cannot still get that money...” (EN6, Central FGD)

Further, in case the student got challenges related to family or work, and failed to get released for school, then they worried about their already paid commitment fee, which they could lose. Further, if they were unable to get the remainder of the fees, it could be a challenge. In this regard, principal 5 explained the practice:

“There is commitment fee of five hundred thousand shillings (UGX 500,000/=), but it is part of tuition. As you come to pick your admission letter, you pay that amount; it is part of tuition – you are explained to very well.” (Principal 5)

Yet another principal alluded to this practice, but with even a higher fee:

“Yes, candidates are expected to make down payment of 80% of the total fees before admission is offered.” (Principal 8)

5.6.3.2.2 Challenges of relevant clinical experience required

ENs felt that they needed more favourable policies and guidelines as those in place seemed unrealistic and unfavourable. A key policy that was discussed was the requirement of two years' experience to become eligible for advancement to the RN. They argued that this was a long time and that it was an encumbrance. They suggested that if it could not be removed, then it should be shortened.

“For me the thing I find unrealistic is that two year waiting time... It should be made one year or less ...to allow one to go back to school before one loses morale...or because even parents pass on who would have helped.” (EN4, Central FGD)

And

“... this policy that talks about you first working for two years, I think it is quite too long because now from the experience, you have taken two years but within the two years you should not have any immediate plan of going to school, now that... you begin to prepare to go to school, maybe you are going to take another one year, and as you prepare, other responsibilities are coming, coming, coming, and you see that every days' need and demand is increasing and by the time you think you should be going to school it is already late. I would suggest that the policy of working for two years should be reduced to one year, so that within the first one year even the other responsibilities are not even much, and other demands have not yet increased, you have not explored the other aspects of life that make you have so many strings attached, you would be able to go to school.” (EN7, Northern FGD)

The two years waiting time was required for one to accumulate relevant clinical experience. This was also something that the ENs struggled with as they did not have control on when or who employed them. Some of them delayed employment or got employment in facilities that did not qualify as accepted clinical experience, hence this requirement was cumbersome and restrictive. The principals explained that the *Two years of relevant clinical experience* as a requirement for admission had to be attained from a clinical care facility and not a pharmacy or drug shop nor any other healthcare facility that was not clinical. Therefore, working in pharmacies and drug shops or healthcare research organisations was deemed irrelevant experience, as this principal explained:

“... when we talk about the minimum experience of 2 years, it doesn't include for example someone who has been working in a drug shop or a pharmacy. One has to be attached to a functioning [clinical] health facility.” (Principal 2)

Results from the survey showed that majority of the ENs (63.8%) indicated the best time for an EN to advance to RN level, being immediately and/or within the first two years after completing the EN course, yet this two-year experience requirement stood in their way. The two-year waiting time requirement for eligibility to advance and the processes involved in dealing with admissions were seen as barriers, 35.4% and 32.6% of the ENs respectively.

5.7 Summary of EN experiences in seeking advancement

The ENs advancement seeking experience was described as challenging, worrying, and frustrating. This was supported by three themes which included Worries of unaffordability and unavailability; Struggling with family responsibilities; and feeling Locked out of advancement. ENs were worried about their capacity to afford the EN-RN advancement and were time constrained as they could not find time to participate in EN-RN advancement programs. They were worried about having insufficient personal finances, being held and limited by employment, consequently remaining with unmet advancement aspirations. They felt that their advancement aspirations were deprioritized by family responsibilities, largely from the need to care for children, spouse, and dependents. They felt being locked out of advancement opportunities because of inability to meet program schedules and unfavourable policies/procedures. Nevertheless, ENs aspired and desired to advance to the RN and this was expressed with much vigour, passion, excitement, and emotion. It emerged that ENs were waiting longer for the EN-RN advancement than they anticipated. While the best time for an EN to advance to RN level was perceived to be immediately and/or within the first two years after completing the pre-service EN course, the majority were already above the period they believed to be the best time for them to advance.

The barriers to educational advancement were mainly related to financial constraints which included insufficient income and personal finances; lack of scholarship for tuition fees; the high cost of tuition fees for RN level advancement; and lack of paid study leave from job. Beyond the financial barriers, other barriers included workplaces unsupportive of advancement, and lack of conveniently scheduled advancement education.

From literature (table 18) the EN advancement-seeking experience was not well articulated. What ENs went through in seeking admissions and looking for accessible programs was not articulated. Further, family dynamics that held ENs from advancing were not well articulated and the role of the family in influencing EN advancement was not clear. Beyond the regulatory phasing out of the EN role, the approaches meted to ENs as they were disfavoured in workplaces were not articulated. With the results presented in this chapter, there is new knowledge improving the understanding of these previously unknown parameters (table 34).

Chapter 6: Institutional: Educational and Workplace Issues

6.1 Introduction

This second chapter of results focused on the institutional issues that ENs grappled with while seeking or progressing in their advancement to the RN. This institutional chapter focused on two institutional domains which were the school and the workplace. The school and the workplace were seen as key stakeholders in influencing the EN-RN programming. Three themes emerged to describe the institutional concerns, and these were Tuition fee concerns; Niche-program design mismatch; and Seeking suitability. The complete table of themes, subthemes and codes can be seen in table 31.

Table 31: Themes, subthemes, and codes for the Institutional domain

Institutional: Educational and workplace issues		
Themes	Subthemes	Codes
Tuition fee concerns	1. Access and cost	a. High tuition cost: Q71, Q72, Q73 b. Inability to access scholarships and student loans: Q74, Q75, Q76, Q77
	2. Favourable payment systems.	a. Instalment payment system: Q79 b. Breaking tuition cost into component parts: Q80, Q81, Q82 c. Study and pay later: Q83, Q84
Niche-program design mismatch	1. Challenges of Program scheduling	a. Unsuitable full-time schedule: Q85, Q86, Q87, Q88 b. Enrolments less than capacity: Q89, Q90, Q91, Q92
	2. Struggle with school regulations	a. Frustration with residential requirement: Q93 b. Struggles of attendance: Q94, Q95, Q96, Q97, Q98, Q99, Q100
Seeking suitability	1. Admission enabling processes	a. All year-round application and admission opportunity: S30 b. Support dealing with admission processes and requirements: Q101, Q102, Q103, S30 c. Ease of exit and re-entry: Q104
	2. Program flexibility	a. Flexible scheduling: Q105, Q106, Q107, Q108, Q109, Q110, Q111, Q112, Q113, Q114, Q115, Q116, Q117, Q118, Q119, Q120 b. Flexibility in residential arrangement: Q121, Q122, Q123 c. General flexibilities
	3. Workplace facilitators	a. Study leave with pay offer: Q127, Q128 b. Permission to work flexible duties: Q124, Q125, Q126

6.2 Tuition fee concerns

This theme of Tuition fee concerns revealed financial concerns that ENs had related to fulfilling their tuition fees payment obligations. Since this was a school requirement, it was well

suited in this institutional domain. The theme was supported by two subthemes of Access and cost; and Favourable payment systems.

6.2.1 Access and cost

This access and cost subtheme exemplified the challenges that ENs had in accessing financial resources that they could use in fulfilling their tuition fees payment obligations to the school. This was supported by two codes of High tuition cost; and Inability to access scholarships and student loans.

6.2.1.1 High tuition cost

Tuition was perceived to be quite high and out of their affordability range, further school related requirements were also perceived to be expensive, hence unaffordable and a barrier to their educational advancement. It was clear that ENs judged school tuition fees as expensive in accordance to their low earning and inability to afford, rather than education market prices or other education cost determinants such as program inputs. Hence this was a judgement that seemed unrealistic. Nevertheless, FGD ENs shared their experiences, and it was clear that some had tried to advance but still failed because they could not afford the perceivably high cost of tuition, as this EN noted the discrepancy.

“Yes, I also tried but the challenge was the same, school fees... I first went for that admission form to just have a look at it and see the amount, but when I looked at it, ...I gave up... What stopped me was ..., according to my salary, I can't manage that school fees.” (EN4, Western FGD)

And

“Tuition is expensive because you can get admission but fail to pay tuition.” (EN 10 Central FGD).

This barrier of high tuition cost was also reported in the subsequent survey with the majority of the ENs 85.8% acknowledging it as their barrier to the RN level career advancement. Further, this unaffordability of tuition was also acknowledged by school principals, however, rather than

look at their tuition as expensive, Principals indicated that the ENs earned very little hence were unable to afford tuition fees for the program, as this principal remarked with sympathy.

“Yeah, like I said [earlier]; most of these ENs earn very little money which cannot pay their tuition. You find them struggling.” (Principal 3)

6.2.1.2 Inability to access scholarships and student loans

ENs noted that access to financial aid in form of scholarships and student loans was a challenge. While they hoped that scholarships and student loans could help, they were disappointed that these were not accessible. ENs shared that they had high hopes in tuition support measures including scholarships and loans, but these were not forthcoming as this EN lamented.

“... diploma nursing [EN-RN program]!!, ... there is no sponsor, I have not heard of it....and I have never heard of people who get scholarship to do registration.” (EN8, Western FGD)

And

“I’m not aware of any other people or organisations who could have supported me. Not really.” (EN4, Western FGD)

Principals also confirmed the above scarcity of scholarships targeting ENs seeking to advance to RN. They revealed that there were few scholarships to support these ENs and the government loan scheme was not offering much help as only very few candidates were awarded the loan out of the very many who applied, further limiting their capacity to clear tuition, as below principal exemplified the situation.

“I have also seen students apply to the students’ loan scheme, only that a few are given. You find that only 2 or 3 in a class are given. So, I don’t know which criteria they follow because you find that many apply but only a few are given.” (Principal 3)

Results from the survey also supported this finding as they showed that ENs identified lack of tuition support as a barrier to advancement (79.3%); and hence regarded it as an important area for designing enablers. Further they showed that this support was expected from employer (79.6%); student loan schemes for tuition fees (77.7%); and the spouse or other family members (76.0%).

However, ENs have not given up, and continue to expect that whenever they get financial aid, they will consider the advancement journey. They had hopes that help could come from government or other employers or any other supporting organisations through scholarships. The quote below exemplifies their need for tuition support, as this EN expressed her hopes.

“Next five years, I think, given the opportunity, and I get tuition, I think I will have upgraded...By God's grace, I may get somebody to sponsor me.” (EN8, Western FGD)

6.2.2 Favourable payment systems

The second subtheme for the theme ‘tuition fee concerns’ describes the convenient payment systems that ENs were looking for and that principal’s thought were possible. It brought out some of the ideas that could be utilised to support the challenge of tuition, and some were already being implemented by some schools. ENs earned very little which prevented them from financing their advancement education, with wages predominantly used for upkeep and living costs.

“Ah! me I tried but when I saw like these courses ...are expensive, ...and if you add in other requirements, you find that you're paying like two point five[UGX 2,500,000 - USD 675], and if you see my salary, the little salary they give us, you will see that you can't manage.” (EN8, Western FGD)

And

“What I wanted to say is in line with what he was talking about, the salary that we always get is too small that it cannot be enough to carter for the family as well as [school]...It is from around 450,000 [USD 121]. ...so I think this money is not enough. ” (EN3, Northern FGD)

The issue of tuition was seen as a huge challenge, assorted options were needed to provide sustainable and lasting solutions. Examples could be negotiating student loans or creating school local scholarships or even allowing the students to do some work. It emerged that schools could do something to contribute for tuition. The example below brings out a perfect exemplar of the commitment to do something. While it wasn't much, it was a step in the right direction as the school made its contribution, as this Principal explained.

“Those with financial challenges; for example, if he/she has not managed to pay school fees, we are designing a program where the student can be given tasks to do for the school. We subtract some money what they may have worked for, and it covers part of their school fees...” (Principal 7)

This favourable payment systems subtheme was supported by three codes of Instalment payment system; Breaking tuition cost into component parts; and Study and pay later.

6.2.2.1 Instalment payment system

This brought out the need for ENs to be allowed to pay their tuition in manageable ways of paying in instalments, as explained.

“Yes..., you can pay six hundred [thousand -half of tuition], then again pay six hundred and you finish the semester. Or pay four hundred, and again four hundred, instalments of four hundred three times.” (EN6, Central FGD)

The survey revealed that up to 80% of ENs, sought instalment payment system as a financial facilitator. Similarly, from the interviews with principals, it was also noted that one of the coping mechanisms was to allow the ENs pay their tuition fees in instalments, as this Principal put it.

“The only support we can offer them as a school is allowing them to pay in bits. Those who are not able to complete their tuition at once, they pay in a phased manner. We sometimes even allow them to do exams when they have a balance [i.e., without completing tuition payments]. But we encourage them to pay this money.” (Principal 4)

6.2.2.2 Breaking tuition cost into component parts

It emerged that there was a practice of charging consolidated fees in which some ENs ended up paying for elements that they were not using because it was just part of consolidated tuition fees. Some ENs preferred not to sleep at school, therefore it did not make sense to charge them accommodation fees, just because it was consolidated with tuition. They argued that they needed some flexibility in this, so that they could leave out what they were unable to afford or what didn't apply to them. Examples cited to explain this were accommodation and dinner costs. They argued that upgrading students were mature and should be left to decide where to sleep, so that they could choose what they could afford or what was suitable for them. And if they chose not to stay at school, they should not be charged for the accommodation and dinner costs together with the lump sum mandatory tuition fees. They had observed that some schools were charging consolidated tuition fees hence causing them to pay for what they didn't use, as this EN explained.

“You pay accommodation fee even when you do not want to stay there...because the program says, full time.” (EN6, Central FGD)

Some schools had broken the consolidated tuition into various parts including accommodation fees, therefore allowing the non-residents not to be charged for this. Others went even further to break down meal costs allowing the non-residents who eat their dinner at home to be charged less than those who stayed at school and ate all the meals. This practice was only in some schools and not all. However, there were also schools that had overcome this and had broken the tuition fee cost into their sub parts, allowing students to only pay for what suited them, as this principal put it.

“Those ones who choose to stay outside the hostel pay less by four hundred fifty thousand shillings (UGX 450,000/=). Yeah, because accommodation is UGX 450,000/=.”

(Principal 7)

And

“Those who do not stay near the school may have their supper at their places of residence...They eat lunch at school, so we charge them 50% of meal cost.” (Principal 8)

6.2.2.3 Study and pay later

Regarding tuition payment schedule, ENs requested that they should be given flexible payment options. They argued that denying them to do exams was unrealistic and untimely. They believed it would be better to let them do the exams and then they could continue looking for the fees. If not cleared, then the school could withhold their results. Their logic was that if they were denied doing exams and they got the money shortly after the exams, scheduling the missed exams was not easy, and in some cases, not possible, as this EN proposed.

“Another unrealistic thing is..., when you fail to pay tuition, even by one hundred thousand [a small amount], they will not allow you even to sit for exams. Unless you finish it. At least they would allow you to sit the exams, they retain your results, and then you can pay after you have finished.” (EN9, Central FGD)

In the interviews with principals this matter of studying and paying later also came up and some principals shared that they had started to implement it, although this was implemented in few schools and not done across board. Although this was on a small scale, it seemed burdensome, as principals revealed that some schools were stuck with ENs who were not paying the tuition fees, so rather than terminate them, they allowed them to study and then pay later, as long as they paid the national examination body fees (UNMEB), as this principal sympathetically explained.

“We have even allowed some to sit for their final exams [with tuition balances]. But we know that when they come for their results, they cannot receive them until they have cleared. So some are allowed to sit for their final exams, then go and work and complete the tuition thereafter – as long as they pay the fees for UNMEB.” (Principal 4)

While this is a good initiative and may be highly appreciated by ENs, it is an intervention that may not be afforded by all schools, especially given that some schools significantly depended on tuition fees to finance the schools budget. Therefore, a careful balance needed to be struck.

6.3 Niche-program design mismatch

This theme describes the challenges related to EN-RN students and their current EN-RN program structure. It was noted that all programs were implemented on a Full-time schedule (Monday-Friday) which was not suitable for the targeted niche. Majority of the programs were residential, with limited possibility for Non-residential option. It was revealed that program enrolments were below capacity. It was supported by two subthemes of Challenges of Program scheduling and Student challenges.

6.3.1 Challenges of program scheduling

This subtheme describes the challenges associated with the program schedule being full-time hence unsuitable. This was supported by two codes of Unsuitable full full-time time schedule and Enrolments less than capacity.

6.3.1.1 Unsuitable full-time schedule

It was clear that the full-time program design structure was not a schedule that was suitable for the EN-RN advancement program as it conflicted with ENs already existing commitments. Even when they enrolled for this full-time program it was not by choice and it was a tough decision-making experience. There were some minor modifications that schools/principals had made allowing the students to be free on weekends to let them return to their families and workplaces to make ends meet. Others had surrendered some of the study days either the first day or the last day of the study week, i.e., Monday or Friday respectively; while others changed class time to start at 9:00am instead of 8:00am. While these offered some slight relief, they did not remove the fact that the whole learning schedule was not suitable to this niche. It emerged that even the principals saw this full-time program as non-suitable, as this principal indicated.

“The program is full-time Monday to Friday...I think one of the things is that the EN-RN extension cannot be a [typical] full-time program [laughs]. I think our governing bodies should receive that; unless they don't want people to work. ... they need to look into the issues of it being full-time.” (Principals six)

And

“What we have seen is that people want to advance their career. However, there is a challenge that one may not be able to leave their place of work to come back for studies. ..., so, the full-time program becomes a challenge.” (Principal four)

Consequently, the program was hectic and conflicted with other work and family roles. This was sometimes associated with students having to delay program completion or dropout.

“The full-time program is hectic, very demanding. The students try to balance between school, work, and their families; ... really hectic and demanding. You find others may be dropping out, and others delaying to complete the course.” (Principal three).

Because the EN-RN program students were struggling with suitability challenges of the program design, they developed coping mechanisms or survival strategies which included working chronic night duty shifts; hiring colleagues to work for them; and engaging in duty exchanges, as earlier explained in the previous chapter, and as this principal shared.

“...most of them have their colleagues who work for them [covering them at work]. I have seen a good number do night duty; so they do like chronic night shifts. Then there are some others who do duty exchanges; yeah, I think that’s what I have seen commonly...” (Principal six)

6.3.1.2 Enrolments less than capacity.

This code brought out the consequence of a challenging program schedule especially to the schools. This pointed to the lack of suitability with the program structure and led to the enrolments being less than capacity. Because of the full-time schedule, the schools failed to attract targeted numbers and their class numbers were often below the school’s class capacity and fluctuated below target. The calculated average enrolment was 32 students against an average capacity of 62 positions for the programs whose principals were involved, revealing that programs were running at half their capacity. It also emerged that all the schools that participated in the study had their enrolment numbers for the EN-RN program far less than capacity or what

they targeted. This below-capacity enrolment challenge was affecting schools differently with the old and mid-aged government owned schools least affected while the new private ones seemed to be most affected. It emerged that some schools had failed to realise significant targets of their enrolments up to and more than 50% of their enrolment targets, suggesting that the magnitude of the problem was substantial; and testament to the seriousness of the unsuitable program design, as this principal shared her frustration.

“Oh!!... We registered it as a full-time program; and we are indeed carrying out a full-time program. And that explains why I have few students. ...because I get many who come for the interviews; but when I am deliberating with them, they prefer a part-time program or weekend program which I don't offer. So, some of them don't turn up because they know it's a full-time program.” (Principal 7)

And

“Our admission capacity is 40..., but the biggest number we have had is 16 students enrolling for the program.” (Principal 8)

And the enrolment was fluctuating.

“We get 50 and below. Sometimes we get 40; sometimes we get 30 or 35; even like 25 in a class. ...the number keeps fluctuating. Our capacity can go up to 200... But we have never reached even half of our admission capacity. We would expect students to come and enrol...but whatever happens out there... May be others go elsewhere.” (Principal 3)

Further, for most of the schools, their starting numbers were exceedingly small, while this could be expected for a new school/program, the case here did not rhyme with the demand fronted for starting the program. This showed that while the demand for the programs was available, the design may not have been suitable hence the low starting enrolment numbers as below principal explained.

“But at the beginning, ... the first years, the numbers were very small. But as we talk they are somehow increasing; we now have 30 students in the registered nursing [current intake]. But we started with eight (8), then four (4), then five (5); like that until now we have risen to 30.” (Principal 5)

6.3.2 Struggle with school regulations

This subtheme describes the struggle of EN-RN students with the school regulations further showing how the programs were not designed with the niche in mind and exposing the program/school regulations as unrealistic and unsuitable. This subtheme was supported by two codes of Frustration with residential requirement; and Struggles of attendance

6.3.2.1 Frustration with residential requirement

For all the principals that participated in the interviews, their EN-RN programs were majorly residential, with limited possibility for non-residential option. It emerged that students struggled with the programs residential requirement which did not align with their circumstances, as explained below.

“Like you are married, you have children, yes we are doing full time classes but they should be considering for these mothers, at least they should say, let people be in their area where they can meet their children, you come to school and in the evening you go back home. But some schools are so strict that they want you full-time at school, day and night. Even the husband himself, he needs time, would you lose your marriage where it is conflicting, you need to go to school but also you need the marriage.” (EN9, Central FGD)

And

“One of the school regulations that students struggle to cope with, is that, as we said, the program is strictly residential. Once they have reported, they are not supposed to move out of the hostel. So, you find them sneaking out and going back to their homes. So that one is often breached. But what the problem might be for the marrieds because being in a residential program; they may not have time to fulfil their marital obligations. Actually,

we have heard a good number of them complain that when they come to school; their marriages become unstable. And I think that's why some of them sneak out." (Principal 2)

6.3.2.2 Struggles of attendance

It emerged that many learners in the EN-RN advancement program continued to work so as to get the financial resources for meeting school tuition fees and upkeep, even though it wasn't a provided option. Consequently, this led to struggles with attending program lessons as they were expected to be in two places at the same time. This code pointed to the issues that schools grappled with in managing the attendance of these EN-RN students to scheduled learning activities, since they continued to attend to their social, family and work/employment commitments. Their struggles led to absenteeism, late coming, leaving early, and low concentration during learning.

It was noted that the ENs struggled to attend learning sessions and ended up absenting themselves. This absenteeism affected their performance at school and probably also affected their working at the place of employment. It was noted that the absenteeism was related to the work, and family reasons as below principals shared,

"Absenteeism in class [talks while laughing] haaa...., some of them are regular dodgers... Others come and attend classes and go halfway, and in the middle of the lesson they have to disappear. This is because they want to make it on the attendance list for the 75% attendance requirement but when they actually need to go back and attend to their jobs." (Principal 3)

And

"...meanwhile they also struggle to attend the program. It is usually a challenge. ... However, it affects their performance. As for us in the school, it affects their performance. I don't know if it also affects their performance at their workplaces; but for us we realise it affects their performance at school." (Principal 9)

And

“Ok, some of the reasons they have given commonly are either themselves are sick or their children are sick, or a relative has passed on, and sometimes when they are government employees, they say that either they want them at the place of work for head counting or they are going to the districts, etc. So, they have given such stories when they are absent from the school.” (Principal 1)

It also emerged that ENs struggled to come on time for their scheduled learning activities as they were involved in other family or work schedules, as this principal shared.

“...they are supposed to be in class from 8am... But because of the challenges at the workplaces some find this as a rule that is very disturbing ... those who work night shifts find it difficult because some people relieve them at the very time they are supposed to be in class; and for us we expect them at 8am. So reporting for class on time is a challenge.” (Principal 8)

And

“...they struggle with punctuality within the school.” (Principal 1)

It was also noted that ENs struggled with remaining attentive in the class for the duration of their scheduled learning activities and this was related to the different multiple roles they played as workers or parents. However, those who did not have strong family and work forces pulling them back did concentrate well, as this principal shared.

“... what I can say is that those who may not have such obligations concentrate very well in the full-time program, whereas those who have them can have their attention diverted into those additional responsibilities.” (Principal 4)

The last challenge with attendance to scheduled learning activities was that students left early. This was mainly due to commitments that they had to meet especially with their employment, but wanted to come to class and meet the required target for attendance of about 75%, as this principal explained in below quote.

“Others come and attend classes and go halfway, and in the middle of the lesson they have to disappear. This is because they want to make it on the attendance list for the 75% attendance requirement but when they actually need to go back and attend to their jobs.”

(Principal 3)

6.4 Seeking suitability

The Seeking suitability theme was the last one in describing the institutional issues and concerns. It focused on the practical and suitable solutions that ENs were looking for while seeking EN-RN advancement education. This theme largely focused on the school and its program as that was where most solutions were sought, although the workplace was also involved. The theme was supported by three subthemes of Admission enabling processes; Program flexibility; and Workplace facilitators.

6.4.1 Admission enabling processes

This subtheme focused on enabling processes that facilitated program entry. It was supported by three codes of All year-round application and admission opportunity; Support dealing with admission processes and requirements; and Ease of exit and re-entry. The table 32 shows two of the codes that were reported by quantitative findings.

Table 32: Admission facilitators

#	Facilitating factor	Mean score (%)	n
1.	All year-round application and admission opportunity	73.3	423
2.	Support dealing with admission processes and requirements	73.0	423

The majority of the ENs (73.3%) sought admissions support in this All-year-round application and admission opportunity (table 32). This referred to the opportunity to receive program applications and process them all year round. This would provide ample time for them to receive and use the admission to negotiate for resources and time required for the program.

Admission processes were seen as cumbersome hence ENs sought support in dealing with admission processes and requirements. They also expressed the need for career guidance especially targeting educational advancement options, opportunities, requirements and so forth. They expressed that their supervisors or the school may have knowledge of useful information which could help them to make the right choices towards their advancement to the RN, hence wanted these people to share this information and give them guidance, as this EN put it.

“Also, our employers and also some other people should not be self-centred, because there might be some people who don't know, but because those employers get to know about those opportunities, so if they could let us know, then it would be good”. (EN5, Central FGD)

Even the principals also raised this concern that ENs needed to be supported with counselling, encouragement and mentoring as this principal explained.

“I think we need mentors; we need role models; we need people who motivate those at that EN level to know that it is possible. And then the schools can put programs that make a difference, so as to make the people at that level also feel like “I need that kind of training.” (Principal 4)

And this should be continuous.

“Then we keep giving them guidance and counselling.” (Principal 2)

6.4.1.1 Ease of exit and re-entry

It was also noted that there was need to give ENs some sense of ease to determine when to exit and when to return. This would allow struggling ENs in advancement programs to take a break if the going became hard and to return when they were in a better state. This would help them so as not to make their advancement journey look like a sprint. Some schools were already doing this as the principal explained.

“Of course, when a student asks for a dead semester or dead year, normally we allow them; and they are not charged any fines.” (Principal three)

6.4.2 Program flexibility

This subtheme focused on the program suitability that ENs sought in enabling their entry and progress in the EN-RN program. It was supported by three subthemes of Flexible scheduling; Flexibility in residential arrangement; and General flexibilities.

6.4.2.1 Flexible scheduling

This code focused on the scheduling of the EN-RN advancement education recognizing the needs of the ENs. The ENs expressed the need for educational advancement programs that were aligned to their life circumstances. It was strongly argued and expressed that education targeting them ought to be tailor made to their availability and meet their life circumstances, since current educational designs did not. The fundamental areas of scheduling flexibility sought were those that allowed work and family responsibilities to continue which were seen as key areas with commitments. They accepted the reality that study leave may not be granted to everyone and hence agreed that they could work and study, as this EN elaborated her preference.

“Me I want a program, say three days in a week, to study then four days at work.” (EN9, Eastern FGD)

And

“For me I know very well that, we nurses who work either in government or recognized institutions, we do work for only four days in a week. So a week has seven days. These three days I think we can program for studies, then the other days we do work. There, we can do both working and studying...” (EN10, Central FGD)

However, there were those who argued that although the full-time program was cumbersome, it was shorter and had its conveniences such as removal of work-related inconveniences that could interfere with one when studying and working at the same time. They argued that when the people in the workplace keep seeing them around, they may over engage them and forget that they have school to attend, hence causing work to interfere in their school program, as this EN shared her preference.

“I would need full time, because ... there is no stress of work again, ... and there is enough time for you to concentrate while at school.” (EN7, Eastern FGD).

Nevertheless, even those who wanted the full-time program, they expressed that some degree of flexibility should be allowed to facilitate a balance in their lifestyles. For example, they also wanted to be with their families over the weekends and public holidays, as these ENs explained...

“I want it [program] to be structured at least Monday to Friday and then on Friday or Saturday I go back to my family.....school that allows me over the weekend to come out and be with my family.” (EN6, Eastern FGD)

Another EN shared reasons for inclinations towards some flexibility,

“... there is wanting full time but when the school is not so strict, ... even most schools during Saturday and Sunday they don't teach, so me I might be there full time but during weekend I also go and do some programs [personal engagements].” (EN3, Eastern FGD)

Yet another EN expressed the need for flexibility towards scheduling that facilitated free weekends and allowing them to move away from school and being with their families:

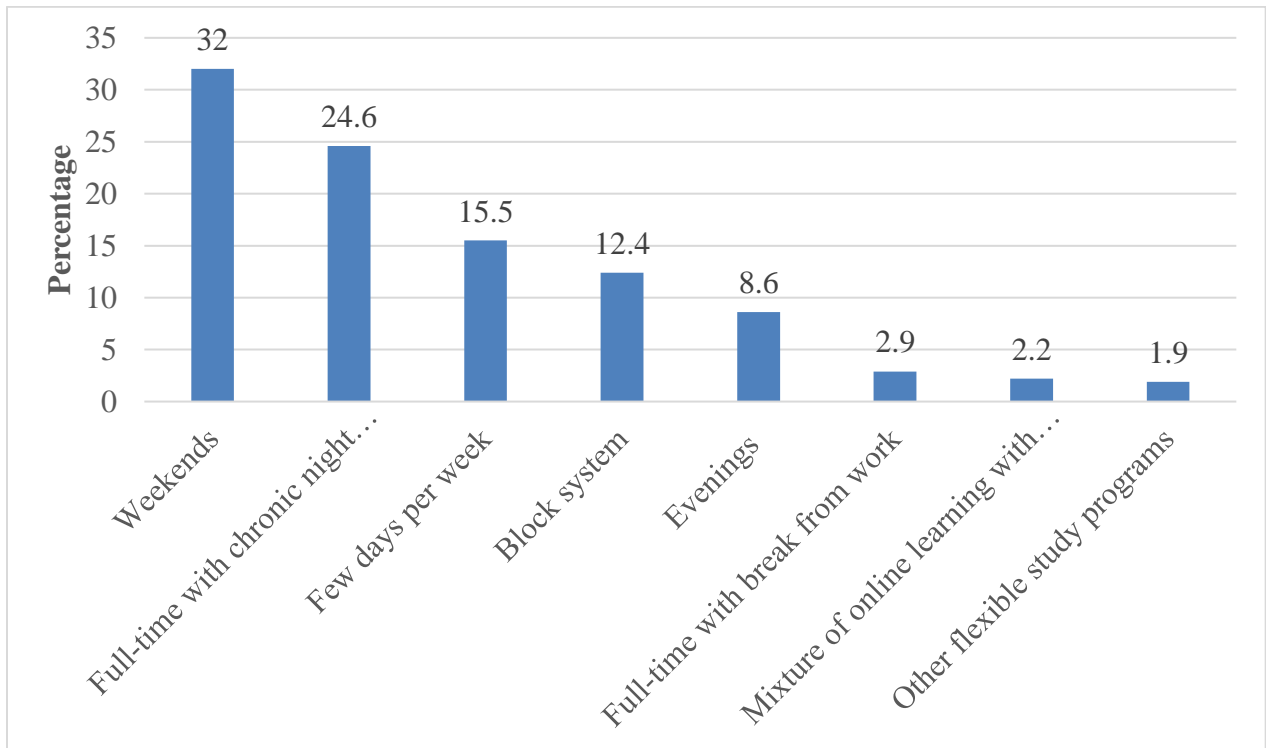
“Even the full-time program should allow some degree of flexibility for the mature family students...So we want schools that don't interfere with our weekend!” (EN9, Eastern FGD)

And this one brought it out in the perspective of public holidays, making schedules that enable EN-RN students to return home to their families:

“Because like issues of public holidays at least all students with families should be given a break ...to go home and share it with their families.” (EN7, Central FGD)

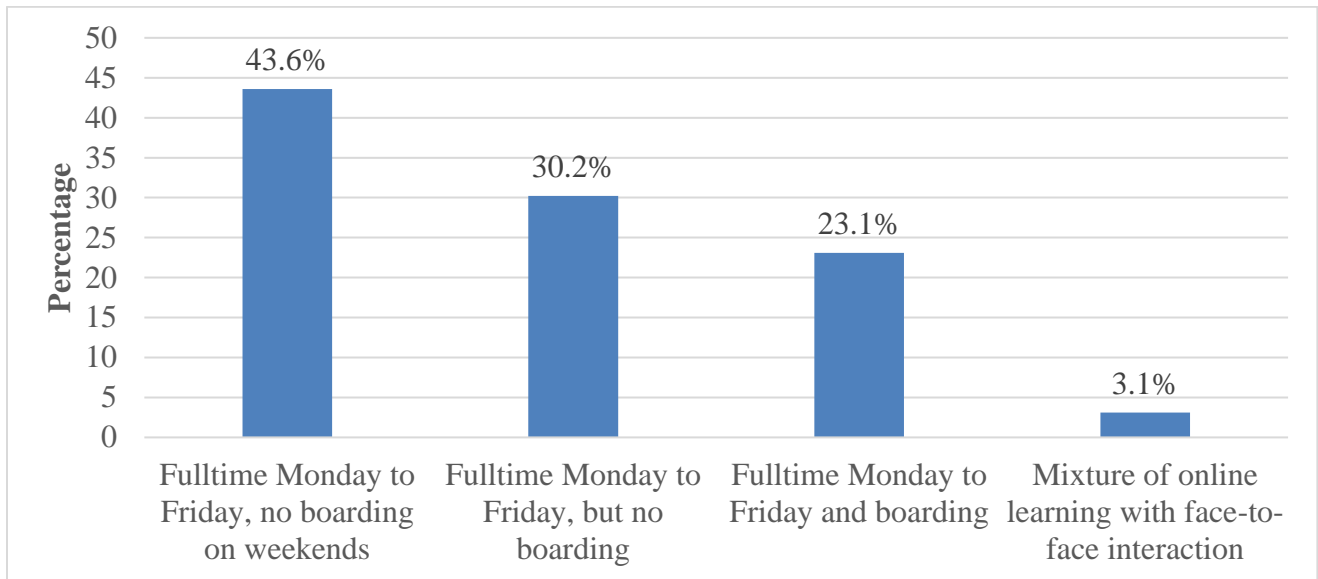
Results from the survey of facilitators supported these findings as they showed that ENs desired schedules that allowed them freedom over the weekends to be with their families (73.8%). The program flexibility was varied with the different scenarios that an EN may find themselves including whether they had study leave or not. The following section provides details of different study leave contexts and the preferred program schedules.

Figure 12: Choice of RN education design with or without study leave



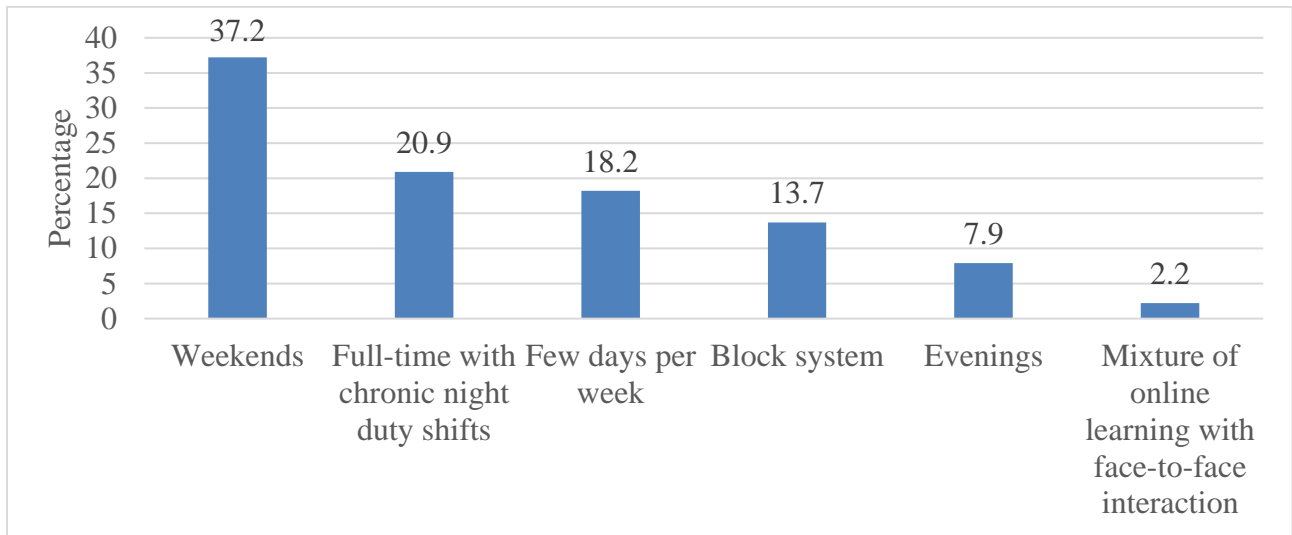
Given the scenario for the Choice of RN education design with or without study leave, the findings reveal that the top three preferred study arrangements were studying on weekends (32%) followed by studying Full-time with chronic night duty shifts (24.6%) and finally studying few days per week (15%) (figure 12).

Figure 13: Choice of RN education design with study leave



Given the study leave, ENs indicated that the top three preferred designs were to study Full-time Monday to Friday with no boarding on weekends 43.6%; followed by Full-time Monday to Friday with no boarding at all 30.2% and Full-time Monday to Friday in boarding 23.1% (figure 13). It should be noted that the weekend was not an option on this item which was assessing their preferred study schedule (design) while having study leave. This was because it was seen as a choice for candidates who did not have study leave. It could have changed results and probably would have been the choice method but including it would duplicate the results in item 71, therefore it was excluded. If it were to be an option, it would have influenced the responses, as already seen in the responses to item 71. The main intention of this item (72) was to identify the preferred full-time options. It was interesting to note that majority of ENs 73.8% (n=310) (cumulative of no boarding on weekends and no boarding at all), preferred an option other than the current one, hence representing a need to modify the current structure for the full time residential EN-RN education for those with study leave. Further, it was interesting to note that even with paid study leave, only 23.1% wanted to pursue their educational advancement education using the current design of full-time and residential, showing how unpopular the current education design was. Again, the least preferred method here was the “mixture of online learning with face-to-face interactions” (3.1%).

Figure 14: Choice of RN education design without study leave



Without study leave, the top three Choices of RN education designs that ENs preferred were Weekends (37.2%), Full-time with chronic night duty shifts (20.9%), and Few days per week (18.2%). Still the least approach was the “mixture of online learning with face-to-face interactions (2.2%) (figure 14).

The table 33 shows a summary of the preferred program designs/schedules listing the top three education design choices under different EN leave contexts.

Table 33: Education design choices for alternative EN leave arrangements

EN leave option	Top three education design choices	Percentage
With or without study leave	1. Weekends 2. Full-time with chronic night duty shifts 3. Few days per week	32% 24.6% 15.5%
With leave	1. Full-time Monday to Friday, no boarding on weekends 2. Full-time Monday to Friday, but no boarding 3. Full-time Monday to Friday and boarding	43.6% 30.2% 23.1%
Without leave	1. Weekends 2. Full-time with chronic night duty shifts 3. Few days per week	37.2% 20.9% 18.2%

Results from the interview with principals also supported the above findings on flexible scheduling as principals also viewed this as a vital need. They suggested that Married students and those who were pregnant or with babies should be given permission whenever possible to go and be with their families; and that the EN-RN program be redesigned to favour working ENs. Some of the schedules they suggested included; Few days per week; Flexible clinical programing; Modular; and Weekend programs. As outlined below.

“Some of them want a weekend program; and actually they have asked for it many times. And because it’s not available, they cannot come. I think that is one of the most common [issues] that we have found.” (Principal 6)

And

“Alternatively, we could also change it to a weekend program. We could start slowly as we monitor its success and maybe it can pick up later.” (Principal 3)

It emerged that this option of ‘Few days per week’ was also an option that was seen as viable. The ‘few days’ schedule could be any selected days of the week, as long as the

arrangement allowed ENs to have days to attend to already existing commitments of work and family obligations, as these principals suggested.

“Yeah, I think if we developed a blended learning program; where students would come around for, may be, only a few days per week and then go back to where they live or where they work as they access the education from there.” (Principal 3)

And

“They can work on it in that direction and maybe they can make the program last for 2 years. And this would cater for adjustments in study days per week (such as a few days in a week), so that they give opportunity for people to stay at work.” (Principal 6)

This referred to a schedule whereby learners could come for a dedicated blocked time of study i.e., some weeks and then they go back to their families and workplaces, as these principals shared.

“You know when a program is full-time, there is some rigorous work done... may be the program could be given some days in a week or some weeks in a month; people can come for maybe modules (i.e., when it becomes a modular program), etc.” (Principal 9)

E-learning was seen as a last resort solution and it seemed that they did not have trust in it being a workable framework to build a hands-on education program for the EN-RN, as these principals shared.

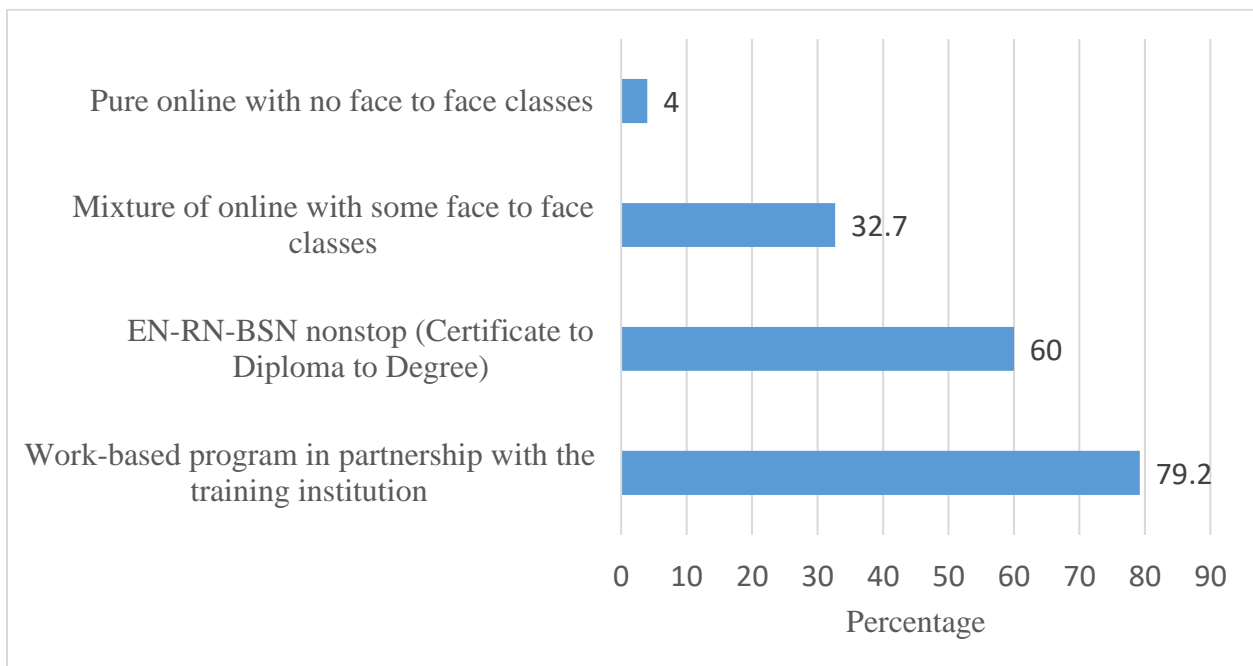
“I don’t know whether the nurses can also try [the same approach]. However, the e-learning also has its own problems.” (Principal 2)

And

“Yes, there are those that do not turn up. The first reason is us offering a full-time program, yet they prefer two (2) days in a week or a weekend program; others even prefer e-learning program.” (Principal 7)

This low priority for e-learning was not surprising as it aligned with the findings from the survey, where it was found to be the least wanted option (2.2%) as a choice of advancement education design in case ENs didn't have study leave, as shown in the figure 14. Even when it was rephrased and put to them again to select areas where they wanted some educational design innovation, the e-learning (Mixture of online with some face-to-face classes) scored low 32.7% while the 'pure online with no face-to-face classes' scored extremely low 4.0%, suggesting that it was not seen as a potential choice.

Figure 15: Preferred education design innovation



The top three preferred education design innovations were Work-based program in partnership with the training institution, EN-RN-BSN nonstop 60 and Mixture of online with some face-to-face classes while the least was pure online learning (4.0%), as seen in figure 15.

Class starting time

Class starting time was also seen as a vital consideration in scheduling reconfiguration. It was also noted that scheduling could benefit from improvements in redefining the class starting time and redefining the study week, as these principals shared. The issue with the class starting

time was that the ENs struggled to be in class by 8:00am or earlier. Therefore, adjusting this time by an hour or whatever made sense in different contexts could ease the challenge and frustration. Otherwise ENs were doing shift handover at workplace during the time when they were expected to be in class, as the class starting time coincided with night-day shift hand over, as this principal explained.

“But because of the challenges at the workplaces ...the other rule that normally affects them is that they are expected from 8am, that is time of arrival in class. But those who work night shifts find it difficult because some people relieve them at the very time they are supposed to be in class...” (Principal 8)

Also, it was noted that there were many ENs who did not have study leave, hence they struggled to find the days to come to school. Many times they ended up missing certain days because they were at their workplaces trying to compensate for the days they were allowed to be at school. Therefore, re-organising the study week could also be a worthwhile consideration, as shared by this principal below.

“Some of them who do not get study leave, have come to the office and talked about it. So that is why I said that sometimes on Friday the class is not attended. So they start on Fridays through the weekend to compensate for off-duty days at their respective workplaces.” (Principal 1)

6.4.2.2 Flexibility in residential arrangement

It emerged that for many of the schools the program was residential in which case the students had to sleep at the school hostel with no choice to stay outside of the school. However, there were some schools that had implemented some adjustments to respond to the demands of the students and provided a flexible accommodation program, allowing the students to decide where to stay. For the schools that did not provide this choice, students had to struggle and fit within the rigid residential arrangement of the school against their choice, and it emerged that this was a challenge, as this principal explained.

“...the program is residential. We have the school hostel, no choice for staying outside...the problem might be for the marrieds because being in a residential program; they may not have time to fulfil their marital obligations.” (Principal 2)

And

“Yeah, ... The program is full-time, and it is strictly residential.” (Principal 5)

It was therefore proposed that there needs to be flexibility in residential options. This was to allow the ENs choose their most suiting option. It was noted that some of the residential options that forced ENs to stay at school were not suitable as a lone option. While the programs that had tried to implement flexible residential options were seeing good results, others that did not implement any solutions struggled with numbers, as this principal shared.

“...most of the extensors are married... so because of... allowing the non-residential option, we improved the number from 20 in 2015 to date when we have 30s..., still when the program was only residential, it used to get between 10 and 15, but sometimes it could even be less than 10.” (Principal 1)

This was an improvement from about 10 students to 36, just because the strict residential plan was modified to be responsive to the needs of their target niche. The outcome from this minor adjustment posted wonderful results. There might be room to score better results with additional residential adjustments that are responsive to the needs of the ENs.

Beyond making residential arrangements optional, ENs also wanted to access accommodation as and when needed (75.3%). This meant that there would be days when they needed accommodation, such as during exam preparation seasons. This meant that the school could still use its accommodation facilities but would be dependent on a fluctuating need. However, it meant that the program target population was better served.

6.4.2.3 General flexibilities

This code referred to other enabling arrangements other than program scheduling and accommodation. It involved facilitators such as having baby or childcare facilities at the nursing school, full-time access to internet and Partnerships with employers. It was noted that 69.8% reported finding Baby or childcare facilities at the nursing school as a facilitator. They also desired Full-time access to internet (65.9%); and being treated as a mature individual (64.9%).

6.4.3 Workplace facilitators

The last subtheme to describe the ‘Seeking suitability’ theme was that of Workplace facilitators. It describes the enablers that ENs needed to enrol and progress in the EN-RN advancement program. ENs strongly felt that the work/employment sphere had a contribution to make to their educational advancement. It was supported by two codes of Permission to work flexible duties; and Study leave with pay offer.

6.4.3.1 Permission to work flexible duties

ENs discussed the most appropriate work design and agreed that a flexible working environment is one of the things they needed so as to facilitate their educational advancement. They argued that even if there were flexible education designs, they also needed some degree of supportive flexibility in the working environment. Here the discussion was based on the fact that, once in a while, the school may schedule some learning experiences which may need them to go away for days from their work. So they needed support from the employer, and they thought that these short periods of absence should be easier to approve than the long study leave of two years, as this EN explained.

“So, it will still be consent from the employer...So if they consent, it is okay. It is favourable...If you can balance and make sure your work is moving on well, then they have no problem. But for example... during the time you are going to be placed for clinical experience, I think they would definitely release you because perhaps that is going to be like two months or three months ...So actually I agree, it’s much easier.”

(EN2, Northern FGD)

They also argued that employers should strive to give some schooling support such as study loans and or scholarships or some form of contribution, and they would be willing to be bonded, as this EN suggested:

“Hmm! That is what I wanted to talk about..., yeah, that you can go to school, maybe your employer supports you, then you make an agreement, after school you come back and work for them.” (EN6, Central FGD)

Survey results of facilitators supported this finding for need of supportive work designs as they showed that majority of ENs (73.3%) viewed ‘Permission from employer to work flexible duties’ as a facilitating factor for their advancement. Further, the results from the interviews with principals also expounded on this by suggesting that employers ought to be supportive, as this principal recommended.

“What I can say is that ENs need to be supported to become RNs especially now with the demand from the East African Community they need to be helped to advance to the registered nursing level. ... the individual health facilities where they work need to support them to see that they [ENs] can be able to upgrade.” (Principal 4)

6.4.3.2 Study leave with pay offer

Since ENs were supporting themselves to finance their EN-RN education, a key contribution that they sought from their employers was study leave with pay (79.4%).

It also emerged that ENs failed to enrol and/or dropped out of the EN-RN advancement program due to work challenges related to not accessing study leave with pay. Some workplaces had few staff and it was perceived to be difficult to navigate study leave. The following three quotes elaborate these.

“What we have seen is that people want to advance their career. However, there is a challenge that one may not be able to leave their place of work to come back for studies. So, basically, there is a challenge of getting study leave from the places of work. ... like

the current ones [in the current group]; only 23 were able to report. there are many who fail to join the program because of those issues. And also, you can find someone has worked for over 10 years but has never been allowed/permitted to go for career upgrading.” (Principal 4)

And

“It may not be that they [employers] don’t want them to upgrade, but they may be looking at them as human resource. They may be overwhelmed in the sense that if they have very few workers at the facilities, releasing the ENs for further studies becomes a problem. That is why many of them [ENs] stay at that low career level without coming back to upgrade.” (Principal 2)

Workplaces need to be courted to be facilitative by providing study leave with pay to these ENs and then arrangements can be made for the ENs to give back, probably through bonding.

6.5 Chapter Summary

Results indicate that the current EN advancement programs are not suitable in meeting EN education needs. The lack of suitability was found to be with the program structure, mainly focusing on the scheduling and residential plans. It was noted that the main program structure was fulltime and residential which was grossly out of tandem with the target population demographics for the program. While the program was fulltime, the target population was ENs who were in fulltime employment/work, with no easy fit to the fulltime program structure. Further, the schools prescribed a residential requirement for the ENs seeking the advancement to RN, which was out of tandem with their demographics. For example, majority of the ENs seeking advancement education were married or had spouses, and children, which were family commitments that did not allow them to sleep at a school dormitory. However, schools had a strict residential plan, meaning that to be their student, one had to sleep in the school dormitory, without a flexible or alternative plan for those not wanting to reside at school.

Due to the unsuitable structure, schools struggled with failing to achieve targets for admissions, hence not filling their classes to capacity; attendance challenges with students being

absent, coming late to learning activities, leaving classes early, and not concentrating in lessons because they often had been working the night before coming to class. Because the income for ENs was low and there was no easy access to scholarships or government study loans, many of them did not complete their tuition on time and at times not at all, hence leaving schools with debts, which complicated the school's planned expenditure.

Though on a small scale, it was commendable that some schools had become ingenious in responding to the demand of their niche and had made responsive alterations moving away from the strict residential options and allowing a flexible arrangement. Some of these included allowing ENs to stay in the dormitories but go home over the weekend; staying at their homes and coming to school daily; and staying at nearby student rented accommodation hence allowing the students to fit in their budgets or to rent houses that allowed them to stay with their young ones, helpers and spouses. Schools had also tried to make arrangements that supported EN tuition challenges.

It emerged that schools were attempting to re-design the program schedule to what they saw fit for their target population, beyond what had been approved. These involved studying for fewer days of the study week; studying block; studying a combination of the weekend and even few days of the study week. All these were geared towards making it possible for students to negotiate with their employers to work and study, allowing them to progress their careers without losing their employment. Further, it also provided an opportunity for students with family commitments to advance.

The perceived facilitators were support to access scholarships/education financing, flexible scheduling, favourable payment systems, programs being within close physical access, support from spouse or other family members, study leave with pay; permission from employer to work flexible duties; all year round application and admission opportunities; encouragement from supervisor or employer; support in dealing with admission processes and requirements; accommodation as and when needed; and baby or child care facilities at the nursing school or university.

The gap in literature (table 18), included financial challenges not being articulated to focus to areas of need, not knowing the flexibility sought by ENs, and the spectrum of support needed for ENs who were failing to get admitted. This chapter provides new knowledge improving the understanding of these parameters (table 34).

Table 34: New knowledge

Unknown from literature	New knowledge
EN Experiences and aspirations	
<p>The EN advancement-seeking experience was not well articulated. What ENs go through in seeking to enrol and finding an accessible program isn't articulated.</p> <p>Family dynamics that ENs juggle with are not well articulated. Role of family in influencing EN advancement not clear.</p> <p>Extent of negative labelling in workplaces not articulated. Beyond the regulatory phasing out, other work-related demeaners for advancement not known.</p>	<p>Experience is riddled with worries of unaffordability and unavailability; struggling with family responsibilities; and feeling locked out of advancement.</p> <p>ENs advancement aspirations were deprioritized by family responsibilities, largely from the need to care for children, spouse, and dependents, in that order.</p> <p>Treated by supervisors and employers in a condescending manner. Felt mishandled, disfavoured, and unwanted. Discriminated from the forefront of caring role.</p>
Barriers and Facilitators	
<p>Family barriers not well articulated. Not clear if impact to females as same as males. Impact of family demographics not articulated i.e., number of children and involvement of spouses and dependents</p> <p>Financial challenges not articulated to point to areas not financed.</p>	<p>Family caring role was a barrier to advancement i.e., children, spouse, dependents. Children competed with ENs' advancement resources including time and finances, the ENs often surrendered. They made sacrificial choices to support their children and wait themselves. Family size mattered, large families were hindrance. ENs had difficult spousal experiences and concerns limiting their educational advancement. ENs were stretched by extended family roles.</p> <p>Access to scholarships and other financing opportunities was limited. ENs struggled with insufficient personal finances. Sought support for access to scholarships and other financing mechanisms, instalment payment system, breaking tuition cost into component parts, and studying and paying later.</p>

<p>No barriers related to policies or regulation</p> <p>Don't know what flexibility should be utilised in low resource and low technology environments. Areas to target in the pre-enrolment support programs not clear.</p> <p>Issues raised by these preparation programs have never been applied and tested to support ENs who have not yet enrolled for school. They only targeted those who had been enrolled/admitted.</p> <p>Support from work-based supervisors was limited to encouragement, more areas not articulated. Indirect costs not fully articulated.</p>	<p>Unfavourable policies and procedures limited EN opportunities for educational advancement. Included recommendation letters from spouses/employers; requirement of two years' working experience to become eligible for advancement to the RN; classification of clinical experience which did not cover full spectrum of scope of practice – working in some facilities did not qualify as accepted clinical experience i.e., pharmacy or drug shop; and charging high commitment fee to access admission letter.</p> <p>ENs were seeking suitability focused on the practical and suitable solutions. Included admission enabling processes (all year-round application and admission opportunity, support dealing with admission processes and requirements, ease of exit and re-entry); program flexibility (flexible scheduling and flexibility in residential arrangement); and workplace facilitators (study leave with pay offer and permission to work flexible duties).</p>
<p>Advancement Programmes</p>	
<p>No evidence on the number of advancement programs Vs demand, and their geographic spread including their impact on access.</p> <p>No evidence on model programs or scheduling for LIC.</p>	<p>Nonflexible scheduling resulted in enrolments less than school capacity.</p> <p>Lack of programs within physical access limited chances of ENs meeting their advancement aspirations.</p> <p>ENs were looking for study programs that allowed Weekend scheduling; full-time day study while allowing ENs to go for chronic night duty shifts; and few days per week schedule.</p> <p>Class starting time needs to be responsive. Start later than 8:00am.</p>
<p>Context</p>	

<p>Current literature did not consider non-enrolled ENs. Evidence did not target ENs in LIC. No new literature targeting ENs</p>	<p>Sample was non-enrolled ENs (those who have not enrolled into advancement programs) Findings are current and were from ENs in LIC.</p>
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Chapter 7: Discussion

7.1 Introduction

ENs experiences when seeking advancement education are riddled with worries of unaffordability and unavailability; struggling with family responsibilities; and the majority of ENs feel locked out of advancement. ENs had passionate advancement aspirations although they were deprioritized by family responsibilities, largely from the need to care for children, spouse, and dependents, in that order. At their workplaces, they felt being treated in condescending ways while at school the program structure implemented was not helping as it was found unsuitable. Consequently, ENs felt locked out of advancement and could not meet their EN-RN advancement aspirations. They sought support for suitable education designs; access to scholarships and other financing mechanisms; and flexible work schedules as discussed in later sections of this chapter. The chapter discusses the study's unique findings alongside existing knowledge, to identify solutions and ways to enhance EN advancement in Uganda to overcome the shortage of RN qualified nurses (Drennan & Ross, 2019; MoH Uganda, 2018a; Munjanja et al., 2005; Nabirye et al., 2014; Naicker et al., 2010; Naicker et al., 2009; Willcox et al., 2015; WHO, 2017a). Three key themes discussed bring together the new knowledge gleaned from the study to generate ways of:

- Overcoming barriers to EN advancement in practice
- Developing new EN-RN Education programmes/framework for Uganda
- Extending the COR model to the LIC context

7.2 Overcoming barriers to EN advancement in practice

The key barriers to EN advancement are reported at four domains including financial, institutional, personal/family, and the workplace. From the financial domain, ENs struggled with affordability as their personal finances were insufficient and alternative financial support was limited or unavailable. Access to scholarships and other financing opportunities was critically limited, hence a barrier to advancement. ENs income was extremely low and their capacity to finance the EN-RN advancement education was extremely low (Brownie et al., 2016; Hagopian

et al., 2009; Matsiko, 2010; MoPS, 2019a; VSO, 2012a). Their capacity to afford EN-RN advancement was not even there as they struggled to support living expenses (Guzi & Kahanec, 2019; Matsiko, 2010; Munjanja et al., 2005; VSO, 2012a). It should be noted that ENs in Uganda earned way below Africa's median monthly minimum wage of US\$220 (per month) (Guzi & Kahanec, 2019; ILO, 2020; MoPS, 2019b).

At the institutional domain (school), the current fulltime and residential program model was seen as a barrier as it was not suiting their life circumstance. This nonresponsive and nonflexible scheduling often resulted in below-capacity enrolments yet ENs were struggling to access them. The lack of programs within physical access was also seen as a barrier, as ENs wanted programs within their locations. Ayer and Smith (1998) found that nurses were taking location of the course as a serious matter that could influence whether they enrolled or not. They also found that this was due to problems associated with travelling to the location including the time and cost involved. A smaller proportion of their population had indicated that they could not take on courses far away because of work and/or home commitments. Ayer and Smith (2017) also had similar thinking and advocated for location as a key feature of the flexible learning system.

Unfavourable policies and practices such as the requirement of two years' working experience to become eligible for advancement to the RN; classification of experience only limited to clinical care; charging high commitment fee to access admission letters; and requirement of recommendation letters from spouses/employers were also seen as barriers. At the family domain, the domestic caring role was seen as a barrier to advancement especially relating to children, spouse, dependents (Care, 1993; Cook et al., 2010; Hylton, 2005; Kenny & Duckett, 2005; Wall, 2016). They competed with ENs' advancement resources including time and finances. Large families often with extended family dependency was a hindrance. From the workplace domain, the barriers included challenges in accessing paid study leave, lack of flexible work schedule, understaffing, unsupportive supervisor, and ban on career advancement imposed by district or employer. To overcome these barriers, solutions have to be aligned to the domains from which they emanate. Therefore, solutions have to target the financial, family, institutional (school), and the workplace domains.

7.2.1 Overcoming financial barriers to EN-RN education

School costs were a key concern that ENs struggled with, consequently solutions need to be aimed at supporting tuition fees and other related expenses. If, even in HICs where nurse salaries are relatively high and scholarships more easily accessed, financial barriers to advancement are still felt, therefore in LICs where salaries are low and scholarships scarce, the financial barriers are more crippling (Cook et al., 2010; Dowswell et al., 1998; Guzi & Kahanec, 2019; Kithuci et al., 2017; Lakati et al., 2012; Melrose & Gordon, 2011; Webb, 2001; Zimmermann, Miner, & Zittel, 2010). Accessing ENs to financial resources for tuition is a top priority as their affordability is limited (Guzi & Kahanec, 2019; ILO, 2020; Stuart et al., 2010; VSO, 2012a). The recommendations are discussed in two sections under increasing access to scholarships and student loans; and favourable payment systems.

7.2.1.1 Increase access to scholarships and student loans

A pragmatic solution to address financial limitations lies in access to scholarships and student loans (Banya & Elu, 2001; Cross & Zusman, 1977; Kithuci et al., 2017). Although Banya and Elu (2001) generally focused on financing higher education in Sub-Saharan Africa, they suggest that well-developed financial support systems should be put in place for the LICs, and the emphasis should be scholarships and student loans. It was noted that ENs had challenges accessing scholarships and student loans as these were seriously scarce and this is the case in many LICs (Bvumbwe & Mtshali, 2018; Lakati et al., 2012; Munjanja et al., 2005; Nguku, 2009). It was noted that nursing education funding bodies prioritized pre-service programs over the advancing programs such as the EN-RN for reasons of producing more nurses. This left ENs on their own and in a dire need for scholarship support. A look at the recent national student loan award report for the 2019/2020 period reveals that of the 1,834 student loans awarded, only 13 (0.7%) were awarded to ENs for advancement to RN, a very small number indeed (HESFB, 2020). With a critically low 0.7% access to the national student loan scheme, it is vital to find dedicated slots or alternative financing models. Therefore, concerted efforts from all stakeholders are needed to find financial solutions for ENs advancement.

Considering that the issue of tuition was seen as a huge challenge, various options are needed to find sustainable and lasting solutions as single interventions may not fit all circumstances, hence requiring multiple solutions (Lakati et al., 2012; Njie-Carr, Adeyeye, Marong, & Sarr, 2016; WHO, 2013; Zimmermann et al., 2010). Examples should include

negotiating, increasing, and protecting the number of student loans allocation to ENs advancing to RN from the national student loan body, after all these are to be paid back. With several stakeholders input, dedicating about 1,000 scholarships annually can be a good start to deal with backlog of ENs and new numbers.

There are few public owned schools that run funded slots, and these have not matched the demand growing over the years and the schools are not physically accessible to all districts where the scholarship positions are tenable. Consequently, a model to redistribute these options is needed. While the current slots can remain through the public schools, government should support/fund slots in private schools that are extended to districts where the government schools are not available. This way the government could reach the under financed and unreached ENs through the government scholarships in private EN-RN schools.

Other options to consider may include negotiating student loans from other private firms at affordable rates; negotiating scholarships from employers, NGOs, charities, and voluntary Service Organisations (VSOs); creating school local scholarships or even allowing the students to do some work for the school in exchange for part waiver of tuition fees (Alani, 2021; Bakkabulindi, 2006; Banya & Elu, 2001; HESFB, 2020; Zimmermann et al., 2010). Although the targets of HICs are slightly higher, targeting to move RNs (diploma) to BSN (degree), LICs could take lessons from their financing models, particularly the involvement of employers. In some countries, employer support towards educational advancement costs for their nurses was quite significant, yet this has not been witnessed in LICs (Altmann, 2011; Delaney & Piscopo, 2004; Webb, 2001; Zimmermann et al., 2010). On top of this, HICs have more financing options including endowments, nurse to nurse funding, non-payable loans, wider reach of payable low interest student loans (Altmann, 2011; Goodman & Kaplan, 2003; WHO, 2020a; Zimmermann et al., 2010). The list of possible solutions can go on, but careful consideration should be made on how to navigate these possibilities, and in some instances concerted efforts will be needed as this cannot be driven by the school alone. Of course, employing organisations may also want to maximise their profits, hence may not be easily forthcoming to support their ENs. A multistakeholder team of professional associations, regulatory councils, line ministries, NGOs, employers, and lobbyists should all be involved. Firms recruiting nurses to work abroad take away a finished product, hence these need to contribute to the production. Countries receiving these nurses should also contribute to their development through their local embassies.

International and regional organisations such as the ICN, WHO-afro, and ECSACON, should be involved in mainstreaming and broadcasting this need. International celebrations and drives such as ‘2020: the Year of the Nurse and Midwife’, ‘nursing now campaign’, and ‘international nurses day’, need to focus their efforts to bring to light the challenges these ENs in LICs face in seeking advancing education, and to design appropriate context relevant solutions (Al-Mandhari, Gedik, Mataria, Oweis, & Hajjeh, 2020; Crisp & Iro, 2018). Of course, they may also choose to have efforts generally directed to financing nursing education, then whatever resources raised are shared with all nurses, not only ENs.

The understanding of scholarship support should be widened to consider various options. For example, to avoid depleting the nursing workforce from workstations, scholarships with locum positions could be designed. Further, knowing that there will be other expenses beyond the tuition fees, scholarships need to target these as well (Banya & Elu, 2001; Olweny, 2011; World Bank, 2012). Since it is known that the cost of education was higher than the tuition fees for most health science programs such as nursing, some scholarships could consider funding the cost of education instead of cost of tuition (NCHE, 2013; Olweny, 2011). This would help schools to meet their costs as well.

A target of 1,000 scholarships annually could be considered, and these can be spread to the different cadres. Once every decade (10 years) there should be a declaration of a challenge year, where involved stakeholders challenge themselves to re-assess the demand and match-up their support or drum the need for it. With the very basic current average annual tuition fees at about UGX 5,000,000 (USD 1,350), the target of 1,000 annual scholarships estimated at USD 1,350,000 should be realizable if stakeholders can take up the challenge. By incorporating the other non-tuition fee support, a total conservative amount could easily be around two million US dollars annually.

Although ENs insisted that tuition fees were high, the fees charged by schools were within comparative range with other vocational schools. Nevertheless, this calls for continued assessment to guide schools to stay within set guidelines for tuition charged. Therefore, institutions need to monitor their fraction of budget met by tuition to ensure that their tuition charges remain affordable. According to the Uganda’s higher education regulator, the recommended percentage of school budget/income derived from fees should range from an acceptable rate of 45% to an ideal percentage of 25% (NCHE, 2014). Beyond the 45% threshold

of budget derived from tuition fees, means that the school is heavily reliant on tuition to sustain the school which could lead to high tuition fee costs hence limiting access to the programs. Already evidence was suggesting that schools were over relying on tuition fees, therefore schools should consider seeking alternative financing avenues to subsidize their budgets to avoid passing every cost to the learner and making the programs inaccessible (Bigirwa, Ndawula, & Naluwemba, 2020a).

7.2.1.2 Favourable payment systems.

Other mechanisms that were considered useful to lessen the challenge of financing EN-RN education was to implement favourable payment systems. Although they don't take away the payment burden, they lessen its impact. These could involve arrangements such as instalment payment system; breaking tuition cost into component parts; and study and pay later opportunities. All of these were highly scored ranging between 77%-80% in the survey and were strongly upheld in the qualitative methods as well.

Instalment payment system

Since ENs were struggling to meet tuition fee expectations, they desired payment arrangements that were convenient for low-income earners, allowing them to pay in instalments as they could not afford paying the tuition fees in one go nor large proportions. Results from this study showed that some schools that had tried this option were requiring instalments of 50%, 25% and 25% of the total tuition fees, which was still unaffordable for some ENs. Going by the median monthly income of UGX 500,000 [about 130 US dollars], ENs needed to save 100% of their salaries to pay for one semester, and this was neither realistic nor possible. The instalment payment system is supported by literature (Ayer & Smith, 2017; Bigirwa, Ndawula, & Naluwemba, 2020a). Although population was not in a LIC, he noted that the ability to pay for a course by instalments was of significance to the majority of nursing respondents in their study and this was due to financial constraints. They further reported that nearly 70% of respondents in their study had difficulty paying in one lump sum and they wanted to pay in instalments. This has also been supported by more recent evidence suggesting that instalment payment was still needed and that they eased the financial burden (Ayer & Smith, 2017). Given the LIC context of low purchasing power and scarce scholarships, the instalment payment system will offer some relief (Guzi & Kahanec, 2019; ILO, 2020). Instalment payment of tuition fees should be done in

convenient scheduling allowing struggling learners to pay when possible, over the course duration. However, caution needs to be taken in ensuring that schools have their expected tuition to allow adequate procurement of goods and services.

Breaking tuition cost into component parts

This was a request to unpack the tuition fees and was the opposite of charging consolidated fees. It involved subdividing the tuition cost into its component elements and allowing students to make choices on which elements they wanted to consume and hence pay for only what they could afford. While all elements may not be optional, it was expected that some elements could be optional allowing students to then make choices on what to pay for and what to leave out. Breaking the consolidated tuition amount into component parts would allow ENs to decide what parts/services they could afford and those they wouldn't, hence allowing them to prioritize and pay for what they could afford or for only the services they absolutely needed. Some of the areas fronted were accommodation and meal costs, however, other consolidated elements within the tuition amount could also be unpacked. However, caution should be taken to unpack elements that could be reasonably optional, without disrupting the school/learning schedule. Breaking tuition cost into component parts was logical and it made sense as it had potential to ease the financial stresses. This was a new learning.

Study and pay later

The study and pay later option is a financial arrangement which proposes a school facilitated student loan of sorts which would allow financially struggling students to complete their studies and continue to pay the school tuition fees even after completing their studies. Rather than lose the students along the program journey due to inability to pay tuition fees, it made sense to have an arrangement in place that would make this possible. While making this arrangement possible was sensitive to the learner's needs, it could have serious implications for schools that heavily depended on student fees to run the school budget/operations. Therefore, careful consideration was needed to balance ENs and school fiscal expectations. Since ENs were already working hence having an income stream, although low, educational financing institutions needed to design financial access options that targeted them. These financial access options

could guarantee requests such as the study and pay later option. A tripartite collaboration between ENs, schools and financial institutions could be negotiated.

Since ENs earn low wages, careful consideration needs to be made to avoid commercial loan interest rates as these were already prohibitively high at double digit figures (around 20%) per year and could disrupt this arrangement (Fiala, 2018; Serwadda, 2018; Turyahikayo, 2015). While considering loan arrangements for ENs, planners should consider a long term outlook to reduce weight of repayment burden (Alani, 2021). If well implemented, this arrangement has the potential to reduce the impact of financial barriers already discussed, since they were already felt as major barriers. As this is a new learning and different from existing commercial student loans, further studies are needed to inform how this could work and the key drivers/stakeholders. Although the work of Goodman and Kaplan (2003) on assessing alternative proposals for higher education financing was built with university programs as the focus, it provides a good background to ponder.

7.2.2 Overcoming institutional barriers

To overcome barriers in the institutional domain (school), there is need to address the EN-RN program suitability issues. Program design suitability has been known as a key success factor (Ayer & Smith, 1998; Calder & McCollum, 2013; Cedefop, 2020; Honey, 2004; Hudson et al., 2014; ICN, 2007; Kenny & Duckett, 2005; Melrose & Gordon, 2011). Although several program elements should be synchronised to the target niche, scheduling and physical access have been most desired (Calder & McCollum, 2013; Cedefop, 2020; Gorski, Farmer, Sroczyński, Close, & Wortock, 2015; ICN, 2007). Considering that the target niche was already in employment, design of the program and its scheduling should be responsive and have the niche-demographics reflected in the program design. Overcoming institutional barriers is discussed in two subsections of admission enabling processes and program flexibility.

7.2.2.1 Admission enabling processes

All year-round application and admission opportunity

This was targeted at improving the admission process allowing expansion of the period to all-year-round application and admission opportunity. This would work like a conveyor belt, and in the future could be named ‘conveyor belt admissions. The all-year-round application and

admission opportunity, referred to the possibility to receive applications and process them for admission throughout the year, even though program commencement would be at a particular time. This is targeted at removing the challenges related to expiration of admissions while the ENs were still struggling to process various requirements. While the pre-service program admissions are fixed to particular seasons of the year aligned to the time when release of grades from the secondary school system happens, there is no reason for fixing the EN-RN advancement admissions to one particular time/season of the year. Therefore, an extended admission time is possible and should be considered. Of course, processes and committees will have to be followed, although nothing reasonable is foreseen to stop admissions from being held more than once or for an extended timeline, if needed. If this extended applications and admissions facilitator was constructed, it would facilitate the opportunity to try out admissions at any time of the year and this would give ENs a longer period of time to pursue and collect whatever was required knowing that there wasn't a short time limitation.

Actualising this facilitator shouldn't be difficult and various options to it could be considered. For example, a school may choose to receive applications all-year round, but only process them for admission at particular times of the year, at least this would have extended the applications receiving duration. This would mean that schools could choose to receive applications throughout the year and wait to release offer of admission letters until the schools preferred time. Taking this approach a step higher, once early applications are received and processed, the school could even consider offering temporary admission letters in waiting for their specific date on their school academic calendar, and then reconcile and confirm admissions near to the usual time. Others could include quarterly schedules or half year schedules depending on the admissions clearing processes to be involved by the school. Once the mindset and intention to facilitate admissions is accepted, the options can be many, and schools can choose what suits them. The focus should be to serve ENs and remove barriers in their EN-RN advancement journey at all levels. Whichever option is selected it would give ENs the confidence that they could apply anytime. This facilitator to extend the application and admission periods to an all-year-round opportunity was a new learning.

Support dealing with admission processes

Educational institutions targeting the EN niche need to build robust and well synchronised support systems that span the entire advancement cycle, including targeting those who may be challenged to enrol and building admission processes that support enrolment into advance programs (Ayer & Smith, 1998; Calder & McCollum, 2013; Choitz & Prince, 2008; Gibbs et al., 2017; Honey, 2004; Hudson et al., 2014; Osborne & Young, 2006; Stein et al., 2011). Education systems should constantly watch out for populations failing to enrol into advancement programs to understand their special characteristics and design how to reach them. The implications for not building supportive admission systems can be dire as was seen in the results when class enrolments remained below capacity yet the ENs had passionate aspirations for advancement.

It was clear that ENs were struggling with the program enrolling processes particularly in dealing with admission processes and requirements. Therefore, support mechanisms are required in dealing with the whole admission processes including the requirements, timelines, and even general career advice/guidance. The process was intricate and providing support would help to overcome the hurdle. ENs seemed to have more questions than answers on the requirements including wondering how they would manage to go over the program. These EN-RN candidates were unique and different from the traditional pre-service students hence needed to be given special attention (Bowl, 2001; Carney-Crompton & Tan, 2002; Choy, 2002; Englund, 2019; Gordon et al., 2013; Keith, 2007; Kim, 2002; Seidl & Sauter, 1990; Suttle & McMillan, 2009; Wild, 2014). The demographic results section already revealed that ENs were a special niche that was working, parenting, relating and considering enrolling for the EN-RN advancement, all at the same time. As a result of these personal circumstances, their needs were unique, requiring supportive mentors to counsel and encourage them, and this was consistent with literature (Melrose & Gordon, 2011; Tower et al., 2015; Wall et al., 2018). Therefore, targeted career talks would be helpful for them to understand how to navigate the expectations. Schools targeting ENs for the RN program need to build facilitative processes and support systems to help those who are challenged to enrol as they already had a lot of challenges to surmount (Ayer & Smith, 1998; Calder & McCollum, 2013; Choitz & Prince, 2008; Gibbs et al., 2017; Honey, 2004; Hudson et al., 2014; Osborne & Young, 2006; Stein et al., 2011). The consequences for not building enabling admission

systems can be dire leading to poor enrolments and failing the primary purpose of these EN-RN programs, therefore these admission-facilitative-changes should be carefully implemented.

Ease of exit and re-entry

Considering that the choice to continue or drop out of the program was not sometimes in the ENs control, it was necessary to have opportunities for exiting and re-entering the program with ease and in non-stigmatizing ways. This would allow ENs to take a break if the going became unbearable and to return when things got better, instead of totally abandoning the program or continuing at detrimental costs as was reported. It was vital to take care and ensure that this option was not stigmatised as a route for problematic students, to avoid students shying away from utilizing it. Advancement education ought to be seen as an effort towards lifelong learning, hence every opportunity to accommodate diversity and pluralism should be encouraged, so as to improve advancement uptake.

Further, the EN-RN advancement education should be seen as a life journey and not a sprint, besides, ENs were already heavily loaded with commitments that doing a sprint would only break them, leaving them with unpleasant educational experiences. Therefore, going slowly but steadily while allowing breaks out of the program and returning when better, should be encouraged. Efforts to avail various options for advancement transition speeds should be made possible so that ENs with varying learning styles and those loaded with commitments can be accommodated (Calder & McCollum, 2013; Childs, Blenkinsopp, Hall, & Walton, 2005). Arrangements that could facilitate credit transfer, modularizing, and along-the-way-credentialling should be considered. Considering that ENs were starting the professional journey from the lowest of the entry routes, the journey ahead was going to be long. Consequently, taking this journey in responsively enabling ways was key to avoid denting the morale for educational advancement of these ENs.

7.2.2.2 Program flexibility

Designing flexible programs was another way of overcoming barriers in the institutional domain. The sought program flexibility was in relation to the structure/design of the EN-RN advancement education that worked for ENs. Majority of the ENs indicated that they needed support for availing flexible RN programs and flexible residential arrangements. This finding

resonated with available literature, and it has been known that flexible education systems enable those seeking learning to move into educational advancement quickly and with ease (CEDEFOP, Ayer & Smith, 1998; Choitz & Prince, 2008; 2020; Honey, 2004). This has been re-echoed and emphasized by the ICN and the state of the World Nursing Report WHO (ICN, 2007; WHO, 2020a). Although literature doesn't comment about residential programs, it was clear that amongst non-traditional niches such as the ENs, this residential requirement was not expected (Ayer & Smith, 1998, 2017; Calder & McCollum, 2013). For groups such as ENs who find themselves unmatched to the traditional education programs because of family, work or other commitments, the flexible program option is their only logical option and almost the standard (Ayer & Smith, 1998, 2017; Calder & McCollum, 2013; Choitz & Prince, 2008; European Centre for the Development of Vocational Training, 2020; Hudson et al., 2014; Melrose & Gordon, 2011). In this study the program flexibility was varied with the different scenarios that an EN could find themselves including whether they had study leave or not. ENs had the opportunity to select choices of their preferred flexible study program arrangements and designs which informed the flexibility options discussed. These have been discussed under the 'developing new EN-RN Education programmes for LIC'.

7.2.3 Overcoming workplace barriers

The workplace was also identified as a domain for overcoming barriers and constructing suitability for EN-RN educational advancement. ENs and school heads were cognizant of the importance of the workplace as an important stakeholder in EN advancement education. Employers and work-based supervisors were perceived as key stakeholders and their input or the lack of it could make or break EN educational advancement efforts, respectively. It was therefore important that schools offering the EN-RN programs collaborated with the EN employers as both had potential to build joint ideas and designs on how best to support these ENs. Learning from recent similar evidence of collaboration between nursing schools and donors, partnerships between schools and major nursing employers could facilitate smoother EN-RN advancement (Brownie et al., 2019). There were various options that could be considered which could include work-based programs (discussed under section on developing new EN-RN Education programmes for LIC) and a host of supportive initiatives, hence overcoming the advancement barriers.

The work-based solutions to overcome EN-RN advancement barriers include improved access to study leave with pay and permission to work flexible duties. While it was known that EN-RN students struggled to balance work and study, it was clear that support of employers and supervisors was a key success factor, and this was consistent with recent and context relevant literature suggesting that partnerships with employers in supporting nursing advancement education were the way to go (Brownie, Gatimu, Kambo, Mwizerwa, & Ndirangu, 2020; Brownie et al., 2019; Cervero & Wilson, 2005; Williams, 2010). It is known that non-traditional students seeking advancement education, such as ENs, need support from their employers and that it was critical (Melrose & Gordon, 2011; Suttle & McMillan, 2009; Williams, 2010). Some of the suggestions that literature recommends included flexible work scheduling and work-based programming, preferential hiring, tuition reimbursement, and pay differential, hence the findings of this study align with literature (Cervero & Wilson, 2005; Gorski et al., 2015; Williams, 2010).

Although the provision of these recommendations squarely falls on employers, other stakeholders may have a role in pushing for these. Some of these stakeholders could be EN-RN advancement schools, professional associations, scholarship providers, professional regulatory bodies, professional labour organisations for nurses and any other relevant professional organisations. Knowing that workplaces are staffed with less than optimum numbers, it will continue to be difficult for employers to permit ENs to engage in advancement education by accessing paid study leave, therefore ingenious ways to engage employers for this cause need to be sought (Kakyo & Xiao, 2018; WHO, 2020a). However, as careful considerations are made to collaboratively design programs that meet the needs of the employer, EN and the school, there is hope that a solution for EN advancement could be possible without jeopardizing service delivery.

7.2.3.1 Study leave with pay

Knowing that the workplace demanded significant time commitments from ENs, it was therefore a domain that should be involved in creating solutions to overcome advancement barriers, since it was pivotal for the release of ENs. It was not easy for ENs to balance work and advancement education because the current EN-RN program structure was not designed to support both. Consequently, ENs were finding themselves with the predicament of two conflicting fulltime commitments, which they could not easily fulfil. This led to ENs taking risky options such as working chronic night duty shift, so as to get time for attending school during day.

From the workplace, efforts to remove bureaucracies in accessing paid study leave should be carefully negotiated and considered. Practices such as developing a multi-year plan of who was eligible to access the study leave would remove hustles of ENs struggling to access it every year. This would remove the uncertainty of knowing who was eligible and therefore, allow EN to plan for further education in good time. Further, clarification was needed if and when unpaid study leave was an option. Employers should be engaged to participate in creating enablers to overcome barriers from their domains. The knowledge of these barriers and a type-set of solutions is only a starting point. A collaborative process with employers should help raise practical solutions for each workplace.

The study-leave with pay offer was seen as a lifeline for facilitating the EN-RN advancement and many ENs hoped to access this opportunity. While it may not be suitable to support many ENs with this paid study leave at the same time, it could be phased to allow ENs access it in turns. Knowing that accessing study leave was a stressful process, employers could be engaged to support this process by creating opportunities to streamline the process including awarding it ahead of time or developing a schedule of who was to receive it.

7.2.3.2 Permission to work flexible duties

In cases where the paid study leave was not possible, ENs were looking for permission to work flexible duties so that they could attend school and continue to work. The flexible duties meant different work arrangements that could be approved by the employer allowing the EN time for school. With most EN-RN program schedules being fulltime, the flexible duty arrangements that ENs were most interested in was the chronic night duty. Knowing that continuous chronic night duties at work might be unsafe, more astute work schedules should be generated to allow the ENs make safer choices. For example, longer and shorter shifts could provide an opportunity to save time for school and avoid coming from night duty to school. If multiple and flexible EN-RN programs were developed, as discussed under the section on developing new EN-RN Education programmes for LIC, there would be need to look at commensurate flexible duty arrangements (Boeren et al., 2010; Brownie et al., 2019; Kithuci et al., 2017; Lavrijsen & Nicaise, 2015). These could include a reduced work week, limited shift rotation i.e., evening and night duty only, block duties, extended weekend duties, and allocation to less busy wards. Because ENs were already finding it challenging to balance work and school,

careful tripartite collaboration between the workplace, schools and the ENs would provide an opportunity to dialogue safer flexible duties allowing ENs to grow to the RN.

7.2.4 Overcoming barriers at the personal and family level

As the family domain had contributed to barriers for EN-RN advancement, overcoming these family centric barriers needed input and/or adjustments to/from the family domain (Boeren et al., 2010; Lavrijsen & Nicaise, 2015). There are changes within the family domain that should be negotiated in order to overcome EN-RN advancement barriers. These involved changes or timing of the domestic caring role especially relating to children, spouse and dependents. While some of these may not easily be re-constructable, efforts can be invested in ensuring that they support the EN in their educational advancement journey. Areas in which changes are needed include support from spouse and/or other family members towards meeting school requirements. This could be financial, material or psychosocial support in form of encouragement from spouse or other significant family members. A key issue that ENs have to reflect on as they consider EN-RN transition was the dependency of extended family members. Sometimes meeting these obligations was counterproductive as they ended up failing to manage their own advancement needs, either for time, finances or material resources. Therefore, this dependency of extended family members needed to be checked and reduced to bare priorities at particular seasons. During seasons when ENs consider advancement, they should have candid discussions with their dependants about prioritizing their advancement aspirations.

Further, knowing how intricate family relations were, and that female ENs may not have the full capacity to influence decisions in their favour, a key consideration would be to delay these family relations. For example, it was clear that when ENs had children, the priority was to support their children first, as they waited themselves, and this could be for many years. By the time these children finish school, the EN would be retiring and their aspirations for advancement would be faded. Therefore, it made more sense to put off having children and first finish their advancement was. Additionally, it was noted that the ENs' (mostly female) decision to pursue advancement required marital permission, which was not usually in their locus of control. Therefore, as ENs are pursuing their pre-service training, they need to be exposed to these realities so that they set their priorities early and right. They also need to find career guidance sessions with mentors who could guide them to make the right choices. This is however, not to

mean that ENs cannot have spouses and/or children and pursue advancement, the advice is that they need to make informed decisions, supported by evidence.

7.3 Developing a new EN-RN education framework for Uganda

This section exposes changes required for EN-RN education to progress and be accessible to the large and stagnant EN workforce that feels locked out of advancement, as was reported in the results. The research findings demonstrate the need for radical improvements to develop the educational programs suitable for the large EN workforce. This recommendation resonated quite astutely with Ayer and Smith (1998) arguing that with the demand placed on education, it should be seen as a service and be supplied in efficient and flexible ways, going beyond the traditional methods. Although their article was more than two decades old, they were spot on in their recommendations and much alive to the current solutions sought in today's situations for the ENs in Uganda and other LICs. Ayer and Smith (2017) reproduction of Ayer and Smith (1998) further highlighted its relevance in today's world as the need to challenge traditional educational methods becomes apparent, and flexible cost efficient and cost effective education systems are needed more.

Even though the work of Ayer and Smith (1998) was informative, it could also be criticised in that, its sample included only educational institution's leaders or faculty and not the targeted traditional students, this could have enriched the findings. Further, this could even be seen in the hierarchy of important aspects of flexibility where financial matters received least priority, although this could also be a context difference. However, since the construction of Ayer and Smith (1998) study was to look at institutions, then we cannot expect that they would have included other domains. Although this doesn't take away the criticism, it also questions how flexibility for non-traditional students can be explicitly studied without the input of the population for whom it was intended. Therefore in utilising the findings of Ayer and Smith (1998), it should be noted that they are limited to the institutional domain, hence not informative on the other domains. As education systems in different parts of the world come to this reality - needing to upgrade their workforce in non-traditional ways, various evidence on flexible education comes to light (Ayer & Smith, 1998, 2017; Choitz & Prince, 2008; Cedefop, 2020; Hudson et al., 2014; Lewis et al., 2016).

The proposed changes in this section relate to embracing program flexibility, admission enabling processes, and workplace facilitators that allow ENs to participate in advancement programs. The mechanisms for financing EN-RN education have already been extensively discussed in the section for overcoming financial barriers. In order to make pragmatic progress with mass EN-RN advancement, unilateral programs should be avoided, and multifaceted recommendations embraced. Consequently, the approach to have a one size fits all national program should be avoided in favour of a rich menu of choices. Regulation that limits scheduling, duration, and accommodation to fixed and restrictive choices should be removed and schools allowed to consider a variant menu of choices astutely targeting the ENs, as detailed in below sections. Although literature on regulation of nurse education is available, it did not identify these restrictive regulatory practices, seen in this study, and instead clamped them together as need for curriculum reforms (Bvumbwe & Mtshali, 2018).

These recommendations are made in light of, and build on the history of African nursing programmes that now should radically transform to meet the current workforce needs (Brownie et al., 2016; Bvumbwe & Mtshali, 2018; Gboku & Lekoko, 2007; King, 2000; Middleton et al., 2014; Munjanja et al., 2005; Nabirye et al., 2014; Uys, 2013). Most scholars that have studied nursing education in Africa agree that there is need for radical transformation to embrace responsive solutions (Bvumbwe & Mtshali, 2018; Kithuci et al., 2017; Lakati et al., 2012; Munjanja et al., 2005; Nabirye et al., 2014; Nguku, 2009; Osero, 2018; Uys, 2013). Bvumbwe and Mtshali (2018) integrative review on nursing education raised key themes needed to embrace change and these included curriculum reforms, profession regulation, transformative teaching strategies, collaboration and partnership, capacity building and infrastructure and resources. While it was comprehensive, it did not detail the radical transformation needed in key areas such as program scheduling to embrace flexible access options and the need to revamp mechanisms for financing nursing education. Nevertheless, it raised some relevant areas such as embracing innovative approaches to teaching and learning which this study did not delve into, but also a needed element.

7.3.1 Flexible scheduling

Having experienced challenges with the fulltime schedule, ENs and schools were interested in suitable schedules that were synchronized to ENs availability. It was remarkable

that the suggested options for suitable scheduling cut across all the three phases of this study, hence validating their demand. Instead of having one fulltime schedule for the EN-RN program as it is currently, it made sense to offer a menu of choices allowing ENs to select what suited their circumstances. This was consistent with literature (Ayer & Smith, 1998, 2017; Bigirwa et al., 2020b; Calder & McCollum, 2013; Childs et al., 2005; Choitz & Prince, 2008; Cedefop, 2020; Honey, 2004; Lewis et al., 2016; Nguku, 2009; Smith, 2003).

Although the work of Choitz and Prince (2008) is nearly 15 years old, their suggestions are quite astute and resonate with some of the solutions that would solve the EN-RN advancement question for countries that have not yet made their educational programs flexible. However, their criticism is that this (their) nice piece of work did not extend beyond the institutional (school) domain. Hence their recommendations are limited to school related solutions negating influences from the other domains. Consequently, their flexible education framework focused on four elements including course scheduling and location, course design, program design, and distance learning. Nevertheless, in building solutions to the institutional domain, these findings were found useful.

Since institutions have already built structures for the current fulltime program, it should be left available as a choice and then alternative options constructed following their demand and synchronizing them to EN needs. Since the schools already have the traditional infrastructure of buildings, equipment, and human resources, the additional flexible programs can use some of these existing resources to limit the amount of capital needed. In developing new EN-RN education programmes for LIC, the needed flexible schedule choices include weekend, modified fulltime, few days per week, block, work-based, e-learning and re-organisation of the class starting and ending time. Below are some of the flexible schedules discussed.

7.3.1.1 Weekend schedule

The weekend schedule would involve programming study days to fall over the weekend days including Saturday and Sunday. It could also be possible to supplement the weekend with the last day of the work week i.e., Friday should there be need. It was clear that the weekend program schedule was demanded, hence it should be added to the menu of choices as soon as possible, if not immediately. Even though addressing a different population, Choitz and Prince (2008) were spot on with their recommendations emphasizing that institutions that target adult

learners seeking advancement education should build alternatives to the inflexibilities already built into traditional higher education institutions. In the scenario of ‘with or without study leave’, the most preferred advancement scheduling arrangement that ENs sought was weekends, which was not an option on the current menu of program schedule choices. In all the study phases and question items where the weekend was provided as an option, it scored highest, showing its popularity and demand, yet it was not a current option on the schedule menu of EN-RN advancement education.

This high demand may be explained by the fact that the weekend scheduling was within the ENs time of control and did not need negotiations with work authorities for permission to enrol in advancement programs. And if any negotiations would be needed at all, it would be easier for authorities to provide permission knowing that this was not going to impact work schedules. Even if it did, solutions could be easily found, hence authorities could easily collaborate to approve this. This demand for the weekend schedule was consistent with literature (Ayer & Smith, 1998, 2017; Choitz & Prince, 2008; Hardin, 2008). Therefore, radical change is needed by the EN-RN advancement regulators to heed this call and design astutely responsive weekend scheduling. Although the weekend option provided a fitting schedule for ENs, it had a limitation that these were only two days. Nevertheless, ingenious ways could be found to accommodate this limitation, such as elongating the program duration, or adding a weekday to the weekend.

7.3.1.2 Modified fulltime schedule

Some ENs still wanted the fulltime program, especially those that had study leave with pay and those willing to make arrangements such as doing chronic night duty to find time for fulltime schooling. For those ENs who could access study leave, this made sense, but for those who were going to depend on the chronic night duty shift arrangements, it was going to be challenging. To put it in simple terms, those seeking the chronic night option were demanding a choice that was not safe and with potential to spur conflict between themselves, schools and workplaces. ENs had observed some of their colleagues using this option to undertake the EN-RN advancement and they succeeded to complete the program. However, they reported this approach being manipulative. This program design relied on the provision of chronic night shifts that neither belonged to the EN nor the school, hence forcing the employer to fix the ENs

availability to a particular shift, a choice that may not be in the interest of the employer. This chronic night shift arrangement was more of a desperate choice than a desired option.

Considering that ENs were willing to sacrifice this hard, it showed their commitment to pursue the RN course. Therefore, program regulators, schools and workplaces should consider making adjustments that facilitate the ENs to do it safely and ethically, should this fulltime schedule remain their desired choice.

Otherwise considering other safer choices was a better option. Even if this difficult choice remained on the menu of program designs, it should be improved through some minor but useful adjustments. The adjustments to consider should include things such as changing the class start and finish time to accommodate those who may be coming from night duty and returning to the same at the end of their day/study time. There were schools that are situated together with hospitals and often owned by the same establishment, these could be in a good position to consider improving this difficult choice of fulltime schedule with reliance on chronic night shift for work. This adjustment is discussed in detail at the end of this section under the 'class starting and ending time' sub section. Another minor change desired was to make weekends and public holidays free for EN-RN students to return home if they wanted, without the need to negotiate their being away.

Depending on the numbers continuing to choose this fulltime schedule and the institutions capacity and culture to accommodate learner flexibility, other adjustments to make it better could include cohort-specific scheduling allowing for shorter study days when the cohort was on night duty and longer study days when the cohort was on night-offs. This could be extended to consider shorter workdays when students were in school and longer workdays when they were in holidays/semester break.

There was an interesting consideration seen in literature where night studies were even considered (Choitz & Prince, 2008). The logic here was that educational scheduling should happen at the time when the EN (non-traditional students) have finished their work and other priority commitments, and in some cases, this was going to be at night especially for those who workday shifts. While this approach seemed radical, in essence it drove a logical approach to offer scheduling that was adult friendly and synchronised to their availability reality. So clearly the principle to weave educational programming around the niches situational circumstances was

a vital consideration. Therefore, even with the fulltime schedule, niche-responsive modifications are possible, to produce a modified fulltime schedule.

7.3.1.3 Few days per week

The ‘Few days per week’ option is when the program schedule runs on any selected days of the week i.e., two or three days per week, depending on what was acceptable between ENs, schools, and employers. This was consistent with literature (Brownie et al., 2019). This option would be arranged on the presumption that it would be possible for ENs to negotiate permission from the employer and that the program would run on a flexible schedule that allowed students to return to their existing commitments of work and family. This program's design was thought to be a compromise that would allow the employer to concede a few days for staff development while the staff continued to work on the other days of the week to satisfy employer needs - sort of a win-win scenario.

While the few days option presumes the days to be selected from the work week (between Monday - Friday), nothing stops ingenuity to consider a combination of weekdays and weekend days. Options such as Thursday to Saturday; Friday to Sunday; or Saturday to Monday would easily provide a three-day study period with minimal interruption or adjustments to the work schedule and family life. As long as the proposed schedule allowed ENs to have days to attend to already existing commitments of work and family, then ENs would consider advancement in large numbers and in safe ways. Whichever name is given to this weekday and weekend hybrid arrangement or blend, it remains a derivative of the few days per week schedule.

7.3.1.4 Block schedule

The Block system is like the few days study option, but with a difference in how the days are scheduled/organised. In the case of the block system, the schedule provides that the days are selected in a month or quarter and then consolidated or pulled together in one solid study block e.g., one week in a month, or one month in a quarter. This would require learners to come for a block time of study for the selected days i.e., some weeks in a month or quarter, after which then they go back to their workplaces and families. While all systems may have their merits and demerits, the block system may suffer consequences of holding ENs away from work for

prolonged periods. Nevertheless, adjustments can be made to accommodate this block arrangement, if the program is demanded.

Additionally, it has benefits such as enabling the days to be condensed into a single block, giving students undisturbed opportunity to cover more material in class without interruptions from the workplace. Depending on how it is organised, it could reduce travel time and costs, hence providing time for covering more parts of the curriculum. The less travel time could also be convenient for students who may have to travel from far places and lodge near the school or at school. More specific studies may inform the best scheduling options for the block method and hence providing an opportunity to further refine this proposed schedule.

7.3.1.5 Work-based schedule

The work-based programming in partnership with the training institution was considering exploring the opportunity of the training programs being brought closer to the working EN and moreover at their workplace (Bloom & Lafleur, 2000; Cervero & Wilson, 2005; Krueger & Rouse, 1998; Williams, 2010). The work-based program in partnership with the training institution was also a practical option that would allow selected schools to do work-based programs for large hospitals that held many ENs. This program design is considered efficient, as it allows ENs to study within or nearby their workplaces, and was consistent with literature (Smith, 2003; WHO, 2013). Nursing schools that are owned or located within large hospitals could design such programs to improve programmatic access to these ENs, hence facilitating their advancement to RN.

This could be facilitated through prior negotiation with the employers to re-work schedules and make alterations that would provide time for attending school, hence avoiding the traditional program scheduling that removes ENs from their workplace. This would eliminate some of the barriers in the programs where the student had to move away from their workplace. If this work-based study programming was to be considered, the study program would be implemented at the workplace, hence reducing travel time and the need for acquaintances (Choitz & Prince, 2008; Smith, 2003; Weiss, 2010). A limitation of this arrangement is that it would only be possible to implement in hospitals or clinical facilities that were large to cover all the needed learning placements including providing non-clinical learning spaces. A positive side to this is that the hospital's facilities would in turn provide a significant part of the clinical

learning placement for the learners/school, hence providing some relief to the school in sourcing these facilities, a win-win situation. While this may only be possible with fairly large hospitals, it would still be beneficial to those in the hospital's neighbourhood such as ENs who may be working at smaller clinics, health centres, drug shops or those who work in nearby non-clinical facilities such as research and community-based organisations or ENs working at school dispensaries. All those small nurse-employing facilities around a big hospitals could benefit from the workplace arrangement and could build richer networks for collaboration.

The work-based program in partnership with the training institution was consistent with literature and provides an opportunity to solve a number of barriers that ENs face while seeking educational advancement (Bassi, 1994; Bloom & Lafleur, 2000; Brownie et al., 2020; Brownie et al., 2019; Cervero & Wilson, 2005; Krueger & Rouse, 1998; Smith, 2003; Williams, 2010). The work of Dias (2013) on the future of nursing education provides thought provoking ideas that could be exploited for Uganda and other LICs. She contends that attaining higher education in nursing can no longer be done in the traditional way and that prospective students cannot afford the luxury of taking time off from work to undertake a period of study, hence calling for new innovations and new flexible approaches including the work-based learning (Dias, 2013). Literature has also guided that careful planning is needed to ensure that nurses seeking educational advancement are supported with programs that are responsive, astutely designed and delivered in the most cost-effective and time-efficient ways. This included bringing the education programs closer to the target population, of which the work-based learning was one example, but more innovative ways were needed (Ayer & Smith, 1998; Calder & McCollum, 2013; Choitz & Prince, 2008; Dias, 2013; CEDEFOP, 2020; Honey, 2004; Hudson et al., 2014; Warelow, Wells, & Irwin, 2011). Therefore, the work-based programming innovation could be a considerable option to facilitate EN-RN educational advancement.

7.3.1.6 e-Learning

e-Learning which is the delivery of learning and training through digital resources was also seen as an option to provide flexibility to ENs (Ayoo & Lubega, 2008; Bigirwa et al., 2020b; Mugisha, 2019; Murebwayire, Biroli, & Ewing, 2015; Nalubega, 2016; Nguku, 2009). Although the principals believed that e-Learning could be an option, they saw it as a last choice. Resonating with the EN responses, the principals did not have much hope in e-Learning being a workable design to build a hands-on education program for the EN-RN advancement. Similarly,

ENs did not score it as a choice structure for their advancement education. Available evidence for a similar e-learning program for midwives indicated that there were a lot of challenges associated with it, therefore it cannot be a choice method that is selected for their advancement education (Bigirwa et al., 2020b; Murebwayire et al., 2015; Nalubega, 2016). It was not surprising that in the 90's, technology driven methods were still least utilized even in HICs (Ayer & Smith, 1998). Nevertheless, given the lessons from the COVID19 global pandemic and any other similar circumstances that may challenge the status quo of education in the future, the need for flexible education is certainly going to be more relevant; and the need to drive this education on an easily accessible platform being paramount. For now, and the foreseeable future, the easily accessible and easily sharable platform is the online driven e-Learning. Lessons from studies that have explored the use of technology in nursing education suggest that it is possible (Harerimana & Mtshali, 2019, 2021; Kenny & Duckett, 2005; Melrose & Gordon, 2008, 2011; Murebwayire et al., 2015; Nguyen, 2015). Even in an African setting, the work of Harerimana and Mtshali (2019) was phenomenal and reported about 77% of nursing students expecting the use of technology in teaching. Further their study suggested some of the areas in which technology was used, i.e., Moodle (learning management system), search tools, podcasts and videocasts, EndNote (for referencing), and Turnitin (for plagiarism detection).

Therefore, while e-learning may not be seen as a choice method currently, it seems that in the absence of a better structure, and in the face of pandemic and uncertainty, it may be a considerable choice if not the only option. Rather than drop it totally, it may be worthwhile to have it as one of the many options of program designs/schedules for EN advancement education. Given the challenges with this e-learning, it may certainly call for improved systems, consequently not all schools should be allowed to run it, but only those that demonstrate capacity for it, in line with infrastructure and support systems (Bigirwa et al., 2020b; Harerimana & Mtshali, 2021; Murebwayire et al., 2015; Muyinda, Mayende, Maiga, & Oyo, 2019; Nalubega, 2016; Nguku, 2009; Suhail & Mugisa, 2007). As well, new guidelines to support regulations of e-learning programs will be needed. Considering that e-learning has been struggling in Uganda and other LICs, hybrid arrangements such as blended learning could be considered (Ayoo & Lubega, 2008; Bigirwa et al., 2020c; Harerimana & Mtshali, 2021; Muyinda et al., 2019; Nalubega, 2016). This would allow learners to come to the school on carefully selected days to complement the e-learning which would be their major learning approach. Therefore, it will be

necessary to mitigate the current barriers to e-learning so as to provide a flexible learning solution that can support ENs in limited resource settings. If all the challenges related to e-learning were solved, it promises a student-centred, self-scheduling and self-pacing option at least for the asynchronous learning activities (Childs et al., 2005; Hosey, Kalula, & Voss, 2016; Kenny & Duckett, 2005; Nguyen, 2015).

In light of the available regulation for standardised nationally scheduled assessments, one wonders if some flexible arrangements such as self-pacing are even possible. However, if flexibility is to be addressed radically and to its fully known or emerging extents, then these are some of the difficult decisions that have to be contended with. This self-pacing can be considered with various options and the appropriate choice can be selected. These options include speed of completing given courses; and the number of courses to study per semester or unit time period (Ayer & Smith, 1998, 2017; Calder & McCollum, 2013).

7.3.1.7 Class starting and ending time

Scheduling convenience was a key ingredient of flexible adult learning, hence EN advancement programs should benefit from modelling some conveniences such as redefining the class starting time just like the requests for redefining the study week. It made sense for learners to start their classes at 9:00am or later rather than the usual 8:00am or earlier as this conflicted with other commitments, hence causing delayed reporting for learning. Therefore, adjusting this time by an hour or whatever made sense in different contexts could ease the frustration while improving attendance and the student experience. Otherwise ENs were doing shift handover at their workplace during the time when they were expected to be in class, while others were still attending to family responsibilities. ENs are demanding better study schedules that could fit in their already busy lives. Even small remodelling of the class starting and ending time was critical and this finding aligned with literature as available evidence was clear that advancement programs for working ENs ought to be flexible to accommodate their niche commitments (Ayer & Smith, 2017; Choitz & Prince, 2008; Kithuci et al., 2017; Lewis et al., 2016; Wade, 2001). Scholars have argued that ENs require advancement programs that are sensitive and meet their unique needs including all flexibilities that make studying less stressful (Choitz & Prince, 2008; Kithuci et al., 2017; Wade, 2001). Therefore, re-organising the study day to start and end at a

meaningfully responsive time could be a worthwhile consideration towards accommodating these learners.

7.3.2 Flexibility in residential requirement

The majority of ENs (73.8%) preferred adjustments in the residential arrangements preferring to have it as a choice for them to decide where to stay, rather than being forced to reside at the school dormitories. The need for flexibility in residential options was also seen as a way of demonstrating sensitivity to ENs and meeting their unique niche needs, as it was clear that they had heavy family responsibilities. It was noted that the current residential options that forced ENs to stay at school were not suitable as a lone option. Even with study leave provided, the majority of ENs (73.8%) preferred adjustments in the residential arrangements preferring to have it as a choice for them to decide where to stay, hence representing a need to modify the current program residential requirement.

The new insight here was that even with the much-needed paid study leave being provided, only a minority (23.1%) preferred to pursue their EN-RN education using the current design of fulltime and residential arrangement, showing how unpopular the current residential requirement was. While this was surprising, it resonated with evidence indicating that among the non-traditional students, educational planning and scheduling should be cognizant of the student's situational realities of family commitments and workplaces (Burns & Gabrich, 2001; Choitz & Prince, 2008; Home & Hinds, 2000; Klein-Collins, 2011a; Levinson, 1978; Osam, Bergman, & Cumberland, 2017). During this study, testimonies from those principals that had tried to implement flexible residential options indicated that they were seeing good results with improved enrolments, while those that did not implement any solutions struggled with program enrolments.

Another flexibility in the residential subcategory revealed that ENs also wanted to have accommodation at the school as and when necessary. This requirement to have accommodation as and when necessary, meant that accommodation facilities would have to be availed on a non-fulltime basis allowing users for short stay opportunities. This was certainly different from the schools usual approach to avail mandatory accommodation, hence would have some implications, such as non-occupancy on some days. Nevertheless, these implications could be

studied and mitigated to meet the needs of ENs. Even if few rooms were reserved for them, they would go a long way to support those who needed them the most.

7.3.3 General flexibilities

The facilitators grouped as general flexibilities were those that generally improved learners' attendance such as baby or childcare facilities at the nursing school; full-time access to internet; and partnerships with employers. Although evidence doesn't detail what infrastructural changes to make, they suggest that in preparing for the reality for flexible learning, these infrastructural and program organisation changes are expected (Ayer & Smith, 1998, 2017). The baby or childcare facilities at the nursing school would provide opportunities to support EN-RN students who had young children or babies that needed to be close to their parents (the EN). For example, breast feeding mothers who did not want to separate from their young child for longer periods of the day, would benefit from provisions that allowed them to come with the baby to school. For example, a basic safe space/room where the EN mother could leave her baby with a caretaker while she (EN) attended lessons would greatly help. As well, allowing the mother to connect with the baby in between lessons would reduce the stress and need to run back home or totally missing school. These would enrich the student experience. While requiring schools to provide spaces for childcare may seem far-fetched and intrusive on the school expectations, some simple interventions considered could yield favourable student experiences and allow them to finish their courses on time and with ease. Providing the room may not be that costly.

While these had not been expressed as barriers, ENs articulated that they needed them as facilitators to ease their advancement journey. These facilitators would need careful consideration to understand the service sense versus the business viability. This was certainly something new and would have cost implications, but the cost was not necessarily prohibitive.

7.3.4 Model program

The idea of creating a model EN-RN program was appealing, however, strong notion to embrace flexibility was logical (Ayer & Smith, 1998, 2017; Calder & McCollum, 2013; Choitz & Prince, 2008; Honey, 2004; Kenny & Duckett, 2005; Lewis et al., 2016; Melrose & Gordon, 2011; Murebwayire et al., 2015; Nguku, 2009; Osero, 2018; Raines & Taglaireni, 2008; Smith, 2003; Warelou et al., 2011). Early on this journey, it became clear that the historical path to build model programs was a unilateral school of thought and restrictive in itself. It resonated

with the trap of one size fits all. Therefore, it was clear that the goal to freeing nursing education was radically embracing full flexibility and allowing for stakeholders to continuously design and build responsive models of programs for their niches and communities. Beyond embracing flexibility, it is crucial that there is utilization of a combination of approaches that optimize flexibility in all the domains. ENs should be freed from the single mandatory current program design and schools guided to try out various options that are synchronised to their niches. In doing this, they can select from the proposed list of model elements (table 35). The implementation of these can be varied along the continuum of change. It would be expected that in the early years of the release to flexibility, the schools may start to adopt these model elements slowly, but as the years go by, they will move to the bolder elements embracing full flexibility. Along the continuum of change they should continue to be supported and guided by newer evidence. Therefore, the recommended educational advancement framework is to open up programs to full flexibility using the model elements, in the sub-section below.

As Choitz and Prince (2008) suggest, it is this optimization and constant understanding of the flexibility needed for different niches that matters. For this to happen, the study recommends model program elements, which stakeholders can then take as building blocks to model their own programs. Regulators should work on regulating minimum standards such as content, placements, and entry requirements while leaving schools to use their resources and ingenuity to develop model programs that are responsive to their niche communities. For clarity, these model elements are divided into influencer domains, which include financial, institutional, personal & family, and workplace domains. Of course, these model elements should continuously be improved depending on circumstances and as newer evidence becomes available.

Model Elements needed in designing flexible EN-RN programs

In recommending these elements careful consideration was taken to ensure that disruptions are minimized or avoided as much as possible, especially knowing the demographic background of ENs as having substantial family and work commitments (Gordon et al., 2013; Hylton, 2005; Marks, 2012; Rapley et al., 2006; Schultz, 1993; Suttle & McMillan, 2009; Wall et al., 2018; Webb, 2001). The elements cut across all the domains of finances, institutional (educational), personal and family, and workplace requirements and/or expectations.

Consequently, the elements covered tuition issues, admission processes, program scheduling, personal and workplace arrangements among others.

In proposing these elements, the background was to remove barriers and accelerate EN-RN advancement education, therefore, users of these elements should be able to select those that align to their institutional philosophy and capability, and not just take on everything. These elements are comprehensively informed by both the literature and the results from the three sequential phases of the study. A key highlight to note is that while there were elements scoring high in all the study phases, there were some elements that scored low in one method/phase, but were heightened in another, bringing out the true value of mixed methods, investigating from multiple angles, and in this case, also multiple stakeholders. For example, while in the survey, ENs did not highly score the lack of flexible education as a barrier to their educational advancement, the FGDs and the interviews were able to heighten this need and emphasised that it was a major barrier for which a solution was needed. Without flexible and responsively synchronized programs, the money alone cannot solve the EN-RN advancement challenges. It was understood that their unaffordability or limited finances for pursuing education shrouded their view of barriers and needs. Without the mixed methods, and relying only on the survey, the lack of flexible scheduling of learning would easily have been missed as a major barrier, contrary to literature and logical reasoning (Ayer & Smith, 1998, 2017; Calder & McCollum, 2013; Choitz & Prince, 2008; Cedefop, 2020; Honey, 2004; Hudson et al., 2014; ICN, 2007; Lewis et al., 2016; Smith, 2003). Even if the shrouding finances were sorted, the availability to attend school would still be a challenge. Consequently, designing flexible schedules was paramount.

However, there were also other major commonalities affirmed by the different methods. For example, the issue of financial barriers was brought out in all the three phases of the study although most emphasized in both the FGD and survey, while it was only another issue in the interviews. Because of utilising different populations, it helped to bring out the differently perceived levels of importance to the various issues, again a benefit of carefully constructed mixed methods. For example, it was noted that in phases where the population was ENs, they fronted financial issues pointing to lack of affordability while in the phases where the population was principals, they prioritized program design issues with focus on suitability and access. Table 35 presents the model elements proposed in designing flexible EN-RN programs.

Table 35: Model elements for designing flexible EN-RN educational advancement programs

Financial	Institutional	Personal and family	Workplace
<ol style="list-style-type: none"> 1. Access to scholarships 2. Instalment payment system 3. Tuition fees contribution from employer 4. Other financial support from employer 5. Access to student loans 6. Removal or reduction of commitment fee 7. Breaking tuition fees into component parts 8. Study and pay later 9. Program subsidizations 	<ol style="list-style-type: none"> 1. All year-round application & admission opportunity 2. Support dealing with admission processes and requirements 3. Removal or reduction of the two-year eligibility requirement 4. Practice experience to consider all areas that employ nurses for professional practice 5. Flexible scheduling convenient for working nurses i.e., weekends, few days per week, block system, work-based program in partnership with the training institution, e-learning, etc. 6. Flexibility in residential status i.e., ENs decide where to stay, when residential ENs free to go home on weekends and public holidays, accommodation at school as and when needed 7. Responsive class starting and ending time 8. Instructional approach that recognizes adult learning 9. Modular sequenced approach 10. Self-pacing 11. Credit transfer 12. Ease of exit and re-entry 13. Baby or childcare facilities at school 14. Full-time access to internet 15. Being treated as a mature individual 16. Counselling and encouragement 17. Good geographic spread with programs being within ENs locality 	<ol style="list-style-type: none"> 1. Delay family (childcare and spouse) obligations 2. Support towards requirements from spouse or other family members. 3. Encouragement from spouse or other significant family members 4. Reduction of extended family dependency 5. Career guidance 6. Sharpen computer skills 7. Psychological preparation 	<ol style="list-style-type: none"> 1. Access to paid study leave 2. Permission to work flexible duties 3. Permission and recommendation to enrol into study program 4. Encouragement from supervisor or employer regarding career advancement 5. Lift ban on career advancement or navigate an access route for ENs 6. Confirmation that ENs will not be terminated because they are seeking advancement. 7. Provide promotion avenues for those completing advancement

7.4 Extending the COR model to the LIC context

Cross' COR model categorised barriers to participation in educational advancement into three major domains of situational, institutional, and dispositional, and these fairly aligned with the barriers outlined by the Ugandan ENs. However, among the situational barriers, the financial and employment barriers shouted loud, coming out as the key barriers, hence needing to be extrapolated/elevated from the situational domain to form their own or to give them some form of additional attention even within the situational domain. Given their impact and attention raised by both the ENs and the principals, they needed to be elevated/extrapolated to their own categories hence proposing to increase the COR model categories from three to five. This change should be considered in the context of LICs due to the financial and work-based concerns (Alani, 2021; Bakkabulindi, 2006; Banya & Elu, 2001; Bigirwa et al., 2020a; Bvumbwe & Mtshali, 2018; Middleton et al., 2014; MoE&S, 2012b; MoH Uganda, 2017; Munjanja et al., 2005; Nabirye et al., 2014; Uys, 2013; Willcox et al., 2015).

This attempt to re-classify these categories is not the first, and is similar to that of Manning and Vickery (2000) and Scanlan and Darkenwald (1984) in which they had attempted a re-classification which extended the domains to six, although these re-classifications only loosely aligned to the current EN perceived barriers as outlined in this study. Hence making Cross' COR classification more applicable to this study than other reclassifications (Manning & Vickery, 2000; Scanlan & Darkenwald, 1984). The limitation with Scanlan and Darkenwald (1984) re-classification was that they did not recognize the challenges arising from the working environment and the education system which were key sources of barriers for the ENs in LICs as seen in this study. While the work of Manning and Vickery (2000) recognised the constraints from the working environment, it did not recognize the educational institutions as a source of barriers.

Given the different social-economic differences of where the COR model was developed and where it was being applied in this study, these classifications need to take the context into consideration, and hence reclassifications/re-organisation should be attempted to suit different contexts. The COR model was developed in a HIC and in this study, it was being applied in a LIC. Having utilised the COR model, a key recommendation is to ensure that users pay attention to the contexts in which they seek to use the model, as model-context re-adjustments may be necessary, as this study recommends. From the findings of this study, it was noted that the financial and work-based barriers were greater than any other in the same domain, yet in the COR model they were

hidden under the situational domain, hence the recommendation that they be elevated to their own domains. Studies looking at working adults who are seeking educational advancement in LICs, are going to grapple with these two i.e., financial, and work-based barriers. Although available evidence did not seek model re-classifications, it was consistent with these two being key sources of barriers (Bvumbwe & Mtshali, 2018; Gboku & Lekoko, 2007; King, 2000; Munjanja et al., 2005; Nabirye et al., 2014; Uys, 2013).

The barriers explored for ENs generally aligned with what Cross had assigned as situational barriers, though some adjustments could make it better, as suggested above. These include personal circumstances arising from spheres such as family, work, poverty, adult identity, cultural issues, and learning track, which Cross categorises as situational hence making it too large and, in some cases, unconnected as there is crossing of spheres to relate with some elements. In order not to lose the importance/priority that stakeholders attached to the financial, family and work challenges within the situational domain classification, ways to reclassify or elevate these should be considered, either as separate domains or subdomains.

Considering a sub-classification within the situational barriers category could be attempted to highlight these findings, as seen in table 36. One way would be to allow a subgroup of all the barriers relating to each of the subdomains to be listed together. For example, within the greater domain of the situational barriers, family could be a subdomain, and within this family subcategory, all the family issues could be listed; and the same could be for the financial and work subcategories, as seen in table 36.

Table 36: Re-organised categories under the situational theme

COR model categories	Institutional issues	Institutional
	Situational	Personal issues
		Family concerns
		Work concerns
Dispositional	Mental Issues	

Another way and which this study found more logical would be to re-organise and raise these loud categories to a higher level, as this reflected context realities. Given the generally low access to financial resources, strong family ties, and heavy dependency on inflexible employments,

it was prudent to re-organise the COR to the LIC context (Banya & Elu, 2001; Brownie et al., 2016; Bvumbwe & Mtshali, 2018; Drennan & Ross, 2019; Gboku & Lekoko, 2007; Guzi & Kahanec, 2019; ILO, 2020; Middleton et al., 2014; Munjanja et al., 2005; Uys, 2013; Willcox et al., 2015). Using the situational barriers as an example, the whole situational barriers domain was disbanded and re-organised allowing the loud barriers to become domains, as shown in table 37. It was noted that the financial barriers contributed more to limiting ENs access to advancement education (Bvumbwe & Mtshali, 2018; Guzi & Kahanec, 2019; Munjanja et al., 2005; Uys, 2013). However, this is not to mean that they are the only ones. The lack of flexible programs also paused serious barriers, but this was already catered for under the institutional domain (Bvumbwe & Mtshali, 2018; Munjanja et al., 2005; Nalubega, 2016; Nguku, 2009). Similar re-organisation was required for the dispositional barriers domain since the results were not strong for mental attributes but favoured attributes related to personal barriers. In this case, both the situational and dispositional were disbanded to make way for new domain names that were contextually relevant.

Table 37: Re-organised COR categories

COR categories	Re-organised COR categories for LIC context
Situational	Financial barriers
	Family barriers
	Work barriers
Institutional	Institutional barriers
Dispositional	Personal barriers

7.4.1 Situational

In semblance with Cross’ situational barriers domain, the ENs emphasised barriers that arose mainly from their poverty, work and family; with little or no information about barriers from their adult identity; cultural issues, or learning track as had been identified by (Cross, 1981). The issue of learning tracks did not surface at all, and this could be attributed to the fact that there was only one learning track in the national EN-RN program structure. This takes the meaning of learning track to mean the different program schedules. However, learner attributes and preferences were only slightly discussed, there may be room to expound on them. The work

of Bvumbwe and Mtshali (2018) was key in highlighting the need to match learner attributes with transformative teaching strategies. However, details of learning tracks as flexible scheduling and matching learner needs are covered under the institutional domain. The cultural issues did not seem to arise, probably because participants could have seen them as more family than cultural. The table (38) shows the results of situational barriers from this study versus those identified by Cross.

Table 38: Situational barriers from this study versus those identified by Cross

#	<i>This study</i>	<i>Cross situation</i>
1.	Insufficient income and personal finances	Family
2.	Concern about going into debts	Work
3.	Lack of paid study leave from job	Poverty
4.	Concern about supporting family relatives	Adult identity
5.	Lack of flexible work schedule from employer	Cultural issues,
6.	Understaffing at workplace	Learning tracks
7.	Unsupportive work-based supervisor or employer for career advancement	
8.	Focus on taking care of biological children	
9.	Lack of time	
10.	Ban on career advancement imposed by district or employer	
11.	Role as a primary healthcare giver for family members	
12.	Having a discouraging or unsupportive spouse	
13.	Lack of technological and computer skills	
14.	Personal health concerns	

7.4.2 Institutional

In comparison to the COR model, there were some differences in the details outlined as elements that composed the institutional barriers domain. For example, the inappropriate course offering was not found as an issue, and this could be related to the uniformity in the curriculum that was implemented in the EN-RN programs. This was with the understanding that inappropriate course offering did not mean program scheduling but referred to some courses within the program being inappropriate or not very relevant to practice. A caveat on this is that this study was not designed to explore curriculum details hence may not answer this question.

Because of the likely confusion of the term ‘institutional’ to refer to both education and workplace institutions, the domain label/name could as well be renamed to ‘educational institutional barriers’ to reflect the specificity of the source of these barriers, being the education system. The enlarged list that Cross proposed for the institutional barriers somewhat aligned well to some of the barriers that ENs described, and they highlighted areas from which meaningful solutions could be drawn. Some of these in which solutions were needed included accessing course information; inconvenient class times; and non-availability of funding arrangements, among others; these were also consistent with literature (Harding et al., 2013; Melrose, 2014).

There were some differences in some of the barriers not being felt in the case of this study. For example in one part of the study (survey), participants did not find limited offering/scheduling as a barrier, as had been identified by Cross (1981); while on the contrary, schools were unable to fill their classes to capacity – a major concern. This showed a clear example that ENs did not seem to comprehend barriers well, probably shrouded by the financial concerns, as was seen in the FGD. However, other parts of the study (FGD and Interview) were able to clarify the limited offering/scheduling which was a major barrier, and this was consistent with literature (Ayer & Smith, 1998, 2017; Calder & McCollum, 2013; Choitz & Prince, 2008; Nguku, 2009; Smith, 2003). While the ENs had aspirations to advance to the RN and hence demanded EN-RN programs, the existing RN programs were not filled to capacity, an indication of a program scheduling flaw. This was a demand-solution mismatch, and the challenge was in synchronizing the RN programs to meet the EN needs astutely.

Other COR institutional barriers that were not experienced by the ENs included institutional equipping, assessment styles, and course placement. Nevertheless, this is not to mean that they should be adjusted from the COR model as they are still consistent with literature (Ayer & Smith, 1998; Calder & McCollum, 2013; Lewis et al., 2016; Nalubega, 2016; Nguku, 2009). Perhaps the differences could be attributed to the time and place context and the type of population for the study. Maybe ENs who have been into an EN-RN program would have different opinions on these issues from the ones used in this study i.e., ENs who have not advanced to RN. This study could not affirm or deny these elements as doing so would need a different population i.e., those who have taken the EN-RN journey.

Table 39 shows the results of institutional barriers from this study versus those identified by Cross. It also includes those that were used to expand Cross’ COR model. Financial barriers

have been left therein because that was according to the COR model. It should be noted, as was seen in earlier sections of this discussion chapter, that this study's recommendation is for financial barriers/issues to be elevated to their own domain.

Table 39: Institutional barriers from this study versus those identified by Cross

#	<i>barriers from this study</i>	<i>Cross situation barriers</i>
1.	High cost of tuition fees	Inconvenient schedules or locations
2.	Lack of scholarship for tuition fees	Inflexible school fees,
3.	Lack of flexible program convenient for working nurses	Inappropriate course offerings
4.	Lack of flexible RN programs within participants locality	Expanded Melrose et al.,
5.	The two-year waiting time requirement	Accessing Course Information
6.	Difficulty in dealing with admission processes and requirements	Limited Provision
7.	Concern about attending school with young students	Assessment Styles
8.		Funding

7.4.3 Dispositional

There weren't reported barriers that belonged to the dispositional category/domain, hence the proposal to rename it as personal domain to describe barriers that were personal in nature. Barriers categorised into the personal domain included lack of time; lack of technological and computer skills; personal health concerns; and concern about attending school with young students. Since they scored quite low i.e., between 40%-20%, they have been simply noted as those areas in which some ENs may feel barred or uncomfortable but certainly not the majority. Nevertheless, the findings resonated with evidence that had studied similar concepts especially the educational advancement of ENs as non-traditional students, revealing that there were struggles with similar concerns especially for time, although the evidence was mainly from HICs (Cook et al., 2010; Dowswell et al., 1998).

Considering that ENs are committed to different personal activities, the issue of finding time can certainly be one to contend with. In relation to this, the theme of unavailability covered this issue and was supported by evidence (Childs et al., 2005; Flynn et al., 2011; Marks, 2012;

Melrose & Gordon, 2011). As well, there was a general consensual match with the other barriers such as not wanting to attend school full-time; and the amount of time required to finish the program, hence suggesting time limitations; and this too, was consistent with literature (Hill & MacGregor, 1998a; Melrose & Gordon, 2011). The implications of time limitations fall squarely on individual ENs as they plan their life career aspirations, hence the recommendation to rename this dispositional domain to personal. This would also take care of all other barriers that were personal in nature.

Chapter 8: Recommendations and Conclusion

8.1 Recommendations for ENs

ENs ought to understand that the level at which they entered the profession is limiting and without growing beyond the EN role, opportunities for career growth and improved income remain minimal. Therefore, professional growth will be needed at some time in their professional life. At the personal and family level, there are barriers that could limit their pursuit for advancement, therefore ENs have to know these and plan accordingly. Unfortunately, some of these barriers to advancement are also desirable life goals such as getting a spouse and producing children. As well there are also issues of the wider connection to extended families. Since some of these personal/family barriers are not modifiable ENs must decide early how and when to engage.

8.2 Recommendations for education institutions

Nurse education institutions are key stakeholders in the EN-RN program provision and should champion the cause for change to advocate for and implement programs matching the needs of their target population.

The table (35 in chapter 7) of model elements needed in designing flexible EN-RN programs has various elements that schools can implement to improve the EN-RN program. School principals and administrators should engage with their stakeholders to decide how best they can use these elements.

8.3 Recommendations for policy, regulation and practice

The provided EN-RN program structure or Diploma Nursing Extension (DNE) as commonly referred to, has limiting areas that need serious improvement. The program schedule and residential requirement were out of tandem for current realities. Both the program schedule/structure and requirement for EN-RN students to be residential were not responsive to EN needs hence require an immediate re-design to accommodate the current realities. Since this is controlled by the BTVET policies, a policy redesign that allows for flexibility in these areas is required to build robust and responsive programs aligned to the target niche.

The requirement for eligibility-experience to be in only the clinical area negates the fact that the scope of practice for ENs is wide, extending to non-clinical placements (UNMC, 2022). Consequently, these need to be included in the eligibility consideration of practice experience for admissions eligibility. Further, the duration of two years' experience was a barrier and efforts to reduce it or remove it should be considered.

Some regulations that ENs struggled with and did not find suitable or logical, such as the requirement for pregnant EN-RN students to exit the program and only return six months after delivery need to be re-thought, as they are not synchronised to the EN-RN niche realities. The demographic profile of these ENs shows that they were already, married, relating and having children. Therefore, pregnancy should not be the reason to send them away from school. They should study with their pregnancy and self-determine when they need a break. Continuing to decide for adult ENs when they needed a break and forcing them to exit programs because of a pregnancy was archaic and overly intrusive.

Deliberate effort is needed to lobby opportunities for financing EN-RN education. Targets of scholarships slots should be made. Radical approaches are needed and a proposal of 1,000 slots per year on a conservative budget should be within view. All stakeholders including Professional associations, regulatory councils, line ministries, NGOs, employers, and lobbyists should be involved. Further, intentional negotiations with higher education financing boards should dedicate and ring-fence slots for ENs.

8.4 Recommendations for aligning COR model to LIC context

Cross' COR model categorised barriers to participation in educational advancement into three major domains of situational, institutional, and dispositional, and these were to some extent correlated to the barriers outlined by the Ugandan ENs. Nevertheless, opportunities to make the model more astute for the LIC context were available. As already discussed in chapter 7, there was need to align the COR model to be context relevant to the various environments where application was being considered. In this study, it was noted that financial and work-based barriers needed to be elevated to their own domains, unlike in the original COR model. This could be attributed to the differences in development index for where the model was developed, being HIC versus where this study applied it, being a LIC. Further, a re-organisation of the situational and dispositional domains was possible as seen earlier in table 37, making it more astute to LIC contexts.

8.5 Recommendations for further Research

The table (35 in chapter 7) of model elements provides a starting point in elucidating what is required when building responsive EN-RN programs, however, ranking the elements with nurses would generate a more focused prioritised model for a school to know what to implement or target first. Although Ayer and Smith (1998) had tried to rank them, there was no clear ranking algorithm used, and the elements were quite few, only limited to time, content, pace, and location that suited the learner; negotiated tutor support; choice of learning mediums; and instalment payment. Since resources for implementing these elements and changes may be scarce, knowing which elements are of higher priority will be key so investments can be effective. The use and application of comprehensive ranking algorithms will need adequate time, resources, and researchers to generate homogenous measuring cycles to allow uniform attribution of priority-rank and commendation for future research.

Further, opportunity remains to categorise and provide a time series when these elements should be implemented. For example, there are those elements that need to be considered before the program enrolls students, while others needed once ENs have enrolled. Even once students are enrolled, the elements can be mapped along the different time frame and seasons of the students' journey. Consequently, plotting the elements on an EN-RN student journey timeline series would be a value guide implementation and resource mobilization and utilization. As well, grouping the sought flexibility into scheduling designs, venue plans, pre-paced Vs self-pacing opportunities, curriculum re-organisation to allow modularizing and multi-level jumps such as EN-RN-BSN will be needed. Doing this will need additional time, researchers, and financial resources that may only fit in the post-doctoral life.

Post-doctoral engagement will focus on these studies and more, with a commitment to improve access to continuing nursing education, beyond only the EN. The table of model elements recommended some changes to the overall EN-RN program design, consequently, implementing and measuring the impact of these nursing education changes is key. The design may include some longitudinal comparisons between student cohorts of different program schedules/designs to identify best practices and understand the changing educational needs on a time continuum. For example, more specific studies are needed to inform the best scheduling options for the block method and hence provide an opportunity to further refine these proposed

program schedules. Further research may indicate which class starting and ending times would be most appropriate for each of the scheduling arrangements. Research is also needed to constantly evaluate the solutions provided to reduce the impact of financial barriers already discussed and to build evidence on the key drivers/stakeholders. All these will ensure that nursing education is responsive and not reactionary nor lagging.

8.6 Strengths and limitations

The strengths of this study were in the well designed and orchestrated multiphase mixed methods design which allowed the opportunity to consult multiple stakeholders sequentially. Through a three-step construction-deconstruction-reconstruction approach, this arrangement made it possible to integrate various data-set results to produce a rich final product that was presented in the two results chapters, i.e., chapter five and six. This also provided an opportunity to analyse patterns and elements of interest across the different methods and study participant groups. An example of this was the realization that in the methods where the participants were ENs, there was a heightened voice on financial challenges, while in the methods where it was principals, the heightened voice was on program flexibility to improve access. This brought out the different weights of importance perceived by the different study stakeholders/participants. These were synergized in the integration and presented in two results chapters. Standing on these strengths, the study makes strong recommendations to free-up nursing education allowing schools to build responsive programs to their niche communities. To support this, a table of model elements needed in the construction of flexible advancement education was presented.

Another strength of this study was its sample placement on the educational advancement continuum. Majority of studies looking at the EN-RN transition utilise a population of ENs who are either in transition or completed the transition to RN. This study was able to use an EN population that had not commenced the transition.

The study also had some limitations. The limitations were related to the challenges meted by the global COVID19 pandemic and the various country responses in form of restrictions and prolonged lockdowns. These caused abrupt disruptions to data collection arrangements, and study meetings with various stakeholders. Alternative approaches to data collection and meetings were sought. Another limitation was from the population utilised. Since the EN population utilised for the study was not in school and had not transitioned to the RN, their knowledge of

the EN-RN transition journey was limited. However, this was supported by the input from the principals who headed the EN-RN transition programs.

8.7 Conclusion

This study provides an in-depth unique evidence base of the experience and barriers facing ENs seeking to advance their career to the RN in Uganda. This research is original and will inform and guide the educational reform required to prepare the high-quality trained workforce to meet future service demand in LMIC. The EN workforce is ready and passionate to advance, however, the education programmes are not adequate, the financial support is insufficient and the time available to access education limited, much being tied in employment and family responsibilities. Model elements that could transform designing of flexible EN-RN programs are provided. Central in these elements was to have the EN-RN program synchronized to their realities. Regulators, nursing schools and other relevant stakeholders are invited to each play their role in driving this transformation of the EN-RN advancement education. In planning the EN-RN advancement education there is need to carefully consider how the program will be financed, recommendations have also been shared. Further, recommendations are provided for ENs; Educational Institutions; policy, regulation and practice; including potential areas where more research may be needed. Indeed, in my role as a nurse educator, I provide the evidence needed to make relevant and informed decisions. I hope this can begin to reshape and direct new EN programme development based on these rich findings. As an independent researcher I look forward to further research measuring the impact of educational reforms in EN advancement and to develop/design new studies when more evidence is needed.

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Appendices

Appendix 1: List of sources for literature review.

1. ERIC
2. JSTOR
3. Wiley Online Library
4. SAGE
5. Taylor and Francis
6. Springer
7. Elsevier
8. Health InterNetwork Access to Research Initiative (HINARI). This research portal through the Hinari summons provides a single user search interface for 18 databases with 13,500 journals, 60,000 e-books, and 110 other information resources.
 - a. PubMed
 - b. African Journals Online
 - c. AIM (African Index Medicus)
 - d. BLDS Index to Development Studies
 - e. CINAHL
 - f. Directory of Open Access Journals Search
 - g. Environmental Index
 - h. Food Science and Technology Abstracts - (1999 - 2014)
 - i. Google Scholar
 - j. IMSEAR (Index Medicus for South-East Asia Region)
 - k. Informit Health Collection
 - l. IRIS (WHO Digital Publications)
 - m. Joanna Briggs Institute EBP Database
 - n. LILACS (Latin Am. & Carib. Center on Health Sci Info)
 - o. Popline
 - p. Scopus (Elsevier)
 - q. Summon-Country Specific Search
 - r. Western Pacific Region Index Medicus (WPRIM)

Appendix 2: Database search strategy

Database	Objective	Search strategy	Results
ERIC Through Ebscoho st	EN academic advancement experiences, aspirations and needs	(enrolled nurs* OR licensed practical nurs* OR second level nurs*)	475
		(enrolled nurs* OR licensed practical nurs* OR second level nurs*) AND (academic advanc* OR education advanc* career develop* OR EN-RN conversion)	6
		(enrolled nurs* OR licensed practical nurs* OR second level nurs*) AND (academic advanc* OR education advanc* career development OR EN-RN conversion) AND (experience OR aspiration OR need*)	6
		Filtered for peer reviewed, fulltext, 1980-2022	3
		Selected articles by relevance	3
	EN education advancement barriers and facilitators	(enrolled nurs* OR licensed practical nurs* OR second level nurs*) AND (academic advanc* OR education advanc* career development OR EN-RN conversion) AND (barrier* OR facilitat* OR motivat* OR enabler*)	5
		Filtered for peer reviewed, fulltext, 1980-2022	2
JSTOR		(enrolled nurs* OR licensed practical nurs* OR second level nurs*)	23,132
		(enrolled nurs* OR licensed practical nurs* OR second level nurs*) AND (academic advanc* OR education advanc* career develop* OR EN-RN conversion)	3,820

		(enrolled nurs* OR licensed practical nurs* OR second level nurs*) AND (academic advanc* OR education advanc* career development OR EN-RN conversion) AND (experience OR aspiration OR need*)	3820
		Filtered for peer reviewed, fulltext, 1980-2022	350
		Selected articles by relevance	0
	EN education advancement barriers and facilitators	(enrolled nurs* OR licensed practical nurs* OR second level nurs*) AND (academic advanc* OR education advanc* career development OR EN-RN conversion) AND (barrier* OR facilitat* OR motivat* OR enabler*)	3,205
		Filtered for peer reviewed, fulltext, 1980-2022	323
		Selected articles by relevance	0
Wiley Online Library	EN academic advancement experiences, aspirations and needs	(enrolled nurs* OR licensed practical nurs* OR second level nurs*)	64,090
		((enrolled nurs* OR licensed practical nurs* OR second level nurs*) AND (academic advanc* OR education advanc* career develop* OR EN-RN conversion))	2,473
		((((enrolled nurs* OR licensed practical nurs* OR second level nurs*)) AND ((academic advanc* OR education advanc* career development OR EN-RN conversion)) AND ((experience OR aspiration OR need*)))	2,470
		Filtered for peer reviewed, fulltext, 1980-2022	2,223
		Selected articles by relevance	5

	EN education advancement barriers and facilitators	(((enrolled nurs* OR licensed practical nurs* OR second level nurs*)) AND ((academic advanc* OR education advanc* career development OR EN-RN conversion)) AND ((barrier* OR facilitat* OR motivat* OR enabler*)))	2,430
		Filtered for peer reviewed, fulltext, 1980-2022	2,184
		Selected articles by relevance	5
SAGE	EN academic advancement experiences, aspirations and needs	enrolled nurs* OR licensed practical nurs* OR second level nurs*	32809
		(enrolled nurs* OR licensed practical nurs* OR second level nurs*) AND (academic advanc* OR education advanc* career develop* OR EN-RN conversion)	950
		(((enrolled nurs* OR licensed practical nurs* OR second level nurs*)) AND ((academic advanc* OR education advanc* career development OR EN-RN conversion)) AND ((experience OR aspiration OR need*)))	962
		Filtered for peer reviewed, fulltext, 1980-2022	310
		Selected articles by relevance	23
		EN education advancement barriers and facilitators	(((enrolled nurs* OR licensed practical nurs* OR second level nurs*)) AND ((academic advanc* OR education advanc* career development OR EN-RN conversion)) AND ((barrier* OR facilitat* OR motivat* OR enabler*)))
Filtered for peer reviewed, fulltext, 1980-2022	300		
Selected articles by relevance	20		

HINAR I summon	Enrolled nurse academic advancement experiences, aspirations and needs	enrolled nurs* OR licensed practical nurs* OR second level nurs*	209	
		((enrolled nurs* OR licensed practical nurs* OR second level nurs*) AND (academic advanc* OR education advanc* career develop* OR EN-RN conversion))	3	
		((((enrolled nurs* OR licensed practical nurs* OR second level nurs*)) AND ((academic advanc* OR education advanc* career development OR EN-RN conversion)) AND ((experience OR aspiration OR need*)))	3	
		Filtered for peer reviewed, fulltext, 1980-2022	3	
		Selected articles by relevance	3	
	EN education advancement barriers and facilitators	((((enrolled nurs* OR licensed practical nurs* OR second level nurs*)) AND ((academic advanc* OR education advanc* career development OR EN-RN conversion)) AND ((barrier* OR facilitat* OR motivat* OR enabler*)))	2	
		Filtered for peer reviewed, fulltext, 1980-2022	2	
		Selected articles by relevance	2	
	Taylor and Francis	EN academic advancement experiences, aspirations and needs	enrolled nurs* OR licensed practical nurs* OR second level nurs*	69,954
			((enrolled nurs* OR licensed practical nurs* OR second level nurs*) AND (academic advanc* OR education advanc* career develop* OR EN-RN conversion))	1,190
((((enrolled nurs* OR licensed practical nurs* OR second level nurs*)) AND ((academic advanc* OR education advanc* career development OR EN-RN conversion)) AND ((experience OR aspiration OR need*)))			1,188	
Filtered for peer reviewed, fulltext, 1980-2022			781	

		Selected articles by relevance	2
	EN education advancement barriers and facilitators	(((enrolled nurs* OR licensed practical nurs* OR second level nurs*)) AND ((academic advanc* OR education advanc* career development OR EN-RN conversion)) AND ((barrier* OR facilitat* OR motivat* OR enabler*)))	1,143
		Filtered for peer reviewed, fulltext, 1980-2022	695
		Selected articles by relevance	2
Springer	EN academic advancement experiences, aspirations and needs	enrolled nurs* OR licensed practical nurs* OR second level nurs	2,535
		((enrolled nurs* OR licensed practical nurs* OR second level nurs*) AND (academic advanc* OR education advanc* career develop* OR EN-RN conversion))	2,396
		(((enrolled nurs* OR licensed practical nurs* OR second level nurs*)) AND ((academic advanc* OR education advanc* career development OR EN-RN conversion)) AND ((experience OR aspiration OR need*)))	2,389
		Filtered for peer reviewed, fulltext, 1980-2022	420
		Selected articles by relevance	0
	EN education advancement barriers and facilitators	(((enrolled nurs* OR licensed practical nurs* OR second level nurs*)) AND ((academic advanc* OR education advanc* career development OR EN-RN conversion)) AND ((barrier* OR facilitat* OR motivat* OR enabler*)))	2,329
		Filtered for peer reviewed, fulltext, 1980-2022	419
		Selected articles by relevance	0
Elsevier		enrolled nurs! OR licensed practical nurs! OR second level nurs!	27,428

	Enrolled nurse	((enrolled nurs! OR licensed practical nurs! OR second level nurs!) AND (academic advanc! OR	356
	academic	education advanc! career develop! OR EN-RN conversion))	
	advancement	((((enrolled nurs! OR licensed practical nurs! OR second level nurs!)) AND ((academic advanc!	314
	experiences,	OR education advanc! career development OR EN-RN conversion)) AND ((experience OR	
	aspirations and	aspiration OR need!)))	
	needs	Filtered for peer reviewed, fulltext, 1980-2022	116
		Selected articles by relevance	10
EN education	advancement	((((enrolled nurs! OR licensed practical nurs! OR second level nurs!)) AND ((academic advanc!	10509
	barriers and	OR education advanc! career development OR EN-RN conversion)) AND ((barrier! OR	
	facilitators	facilitat! OR motivat! OR enabler!)))	
	Filtered for peer reviewed, fulltext, 1980-2022	9179	
	Selected articles by relevance	5	

Appendix 3: list of databases that were selected

1. ERIC: The Education Resources Information Centre (ERIC) is an online digital library of education research and information. ERIC provides access to about 1.3 million bibliographic records (citations, abstracts, and other pertinent data) of journal articles and other education-related materials. It is the world's largest and most frequently used education digital library. Further, ERIC indexes a wide variety of peer-reviewed, full-text materials on education. Since this study had an education component, ERIC was topically relevant for inclusion.
2. JSTOR: Journal Storage (JSTOR) is a digital library initially used to contain digitized back issues of academic journals, but now also includes books and other primary sources, and current issues of journals. It provides full-text searches of almost 2,000 journals. It also indexes material that is aimed at improving teaching and learning using digital technologies and indexes about a quarter million resources on nursing.
3. Ethos: E-Theses Online Service (EThOS) is a bibliographic database and union catalog of electronic theses provided by the British Library. It has about 480,000 theses in many fields including education and health which were the intersecting fields for this study.
4. SAGE: SAGE Publishing, is an independent publishing company. It publishes more than 1,000 journals, more than 900 books a year, reference works, and electronic products covering business, humanities, social sciences, science, technology, and medicine. The material indexed in sage publishing produces educational resources that are relevant for supporting instructors, policy makers, educators, and researchers. Due to its collection having education and nursing literature, it was found relevant for inclusion as this aligned to the EN educational advancement theme of this study.
5. Taylor and Francis: Taylor and Francis online is an online database with about four and a half million articles in various disciplines including education, health, and humanities. Its collection on nursing was slightly over two million, while that of nursing and education was about one million. The collection in Taylor and Francis online is well aligned to nursing and hence relevant for searching in this study.
6. Springer: Springer Publishing is a publishing company of academic journals and books, focusing on the fields of nursing, gerontology, psychology, social work, counselling, public health, and

rehabilitation (neuropsychology). It is one of the top publishing companies with nursing and education collections.

7. Mak IR: Makerere Institutional Repository (Mak IR), formerly called Uganda Scholarly Digital Library (USDL), is a collection of scholarly output by researchers of Makerere University, including scholarly articles and books, electronic theses and dissertations, conference proceedings, technical reports and digitized library collections totalling to about 7,000. The collections are from various schools, colleges and institutes including the College of Education & External Studies (CEES) and College of Health Sciences (CHS) which covers nursing. Makerere University being the longest standing university in Uganda (over 100 years) is a central collection hub of health and educational material. It was therefore included for this the collection as it stored some of the key material produced on the subject.
8. Wiley Online Library
Wiley Online Library hosts peer-reviewed primary research and journals across a wide array of health sciences including nursing, hence was relevant for inclusion.
9. Health Inter-Network Access to Research Initiative (HINARI). This research portal/gateway is supported by the World Health Organisation and is accessed through the Hinari summons which provides a single user search interface for 18 databases with 13,500 journals, 60,000 e-books, and 110 other information resources. It is one of the leading portals providing access to some of the best databases on health specifically arranged for low-and middle-income countries. Considering this study was looking at EN educational advancement in the context of a LIC, this portal was well aligned to find collections that were context relevant. The databases are listed below.
 - a. PubMed
 - b. African Journals Online
 - c. AIM (African Index Medicus)
 - d. BLDS Index to Development Studies
 - e. CINAHL
 - f. Directory of Open Access Journals Search
 - g. Environmental Index
 - h. Food Science and Technology Abstracts - (1999 - 2014)
 - i. Google Scholar
 - j. IMSEAR (Index Medicus for South-East Asia Region)

- k. Informit Health Collection
- l. IRIS (WHO Digital Publications)
- m. Joanna Briggs Institute EBP Database
- n. LILACS (Latin Am. & Carib. Center on Health Sci Info)
- o. Popline
- p. Scopus (Elsevier)
- q. Summon-Country Specific Search
- r. Western Pacific Region Index Medicus (WPRIM)

Appendix 4: Analysis of the articles selected

#	Author/ Article Title	Study Type/ Article Type	Theoret ical Frame work	Questions/ Hypothesis/Vari ables	Method ology	Sample/Size	Analysis/Statisti cs	Conclusions
1.	Boot et al. (1988) Conversion courses: the views of British enrolled nurses	Peer reviewed article.			Survey	ENs in mental health. Targeted 250 but got 100. Response rate of 40%	Descriptive statistical analysis of quantitative data and Interpretive analysis of qualitative data.	Suggests that curriculum revision be revisited to target certain courses. Suggested that Programmes utilizing continuous assessment and Ward based programs would be very popular. Barriers to registering in programs involved conflicting family responsibilities and doubts of academic ability. Also touched on the Preferred method of converting Aspiration for advancement to RN was high. Some who didn't want to covert, felt that they were too near retirement
2.	Dowswell et al. (1998) Enrolled nurse conversion: trapped into training	Peer reviewed article. Research study, part of a bigger study	Theories from Social roles and role strain.	Examined the continuing education and training of enrolled nurses in health service.	Qualitati ve explorato ry Intervie w	ENs enrolled into an open learning conversion course. n=16.	Emergent	Challenging to balance study-job and family obligations. With effects on family dynamics, social and work relations. Expressions of feeling pushed or pressured into joining conversion to RN. Self-confidence improved from educational accomplishment and hopes for better employment. motivations for joining the course were work-culture related. Participants didn't pay tuition but felt the financial pressure. ENs felt pressure to upgrade (could be due to the phase out) argue that rather than wait to pressure ENs for upgrading, conversion education should be enabling/facilitative to allow ENs transition without having to be pushed. And even if the phasing out push is to ever come, it would find fewer ENs to push. The sample was small

3.	Hill, & MacGregor (1998) Charting the course of change	Peer reviewed article.	Transition process, adapted from Broom (1991)	The change process taking place in enrolled nurses (EN) in a part-time conversion programme	Survey	stratified convenience sample of ENs undertaking conversion to Part 1, 3 or 8 of the UKCC Professional Register in the first 2 years of running the course. n=100	Quantitative analysis	The study demonstrates that part-time ENs in this particular sample appear to have made a successful transition from EN to first level nurse. This programme, financed and supported by employers, seems to have successfully achieved a change in individual thinking processes and clinical practice. It is clearly important that the teachers and clinical managers understand this transition process and provide an empowering tripartite support for the individual student.
4.	MacGregor & Hill, (1996) Converting the image	Peer reviewed article.		explore the issues for the professional development of nurses who hold a level two registration and the challenges facing their managers and educationalists.	mixed methods, survey and interviews, Does not clarify the sequency	-	-	Most students lack academic skills for higher education. Negative past learning experiences hamper new learning. EN-RN courses are a worthy investment. Should be offered in cost effective multiple tracks.
5.	Paech (2002) Making the transition from enrolled to registered nurse.	Peer reviewed article.		The lived experience of former enrolled nurses making the transition from nursing student to graduate nurse.	phenomenology	EN students in degree program N= 9	van Manen's (1990) steps of thematic analysis.	Three main themes: Responsibility and accountability, change, and job satisfaction.
6.	Iley (2004) Occupational changes in nursing: the situation of enrolled nurses	Peer reviewed article. secondary analysis of data	Witz (1992), Davies (1995)	Examine the operation of professionalizing strategies in gendered occupations: the situation of enrolled nurses.	Cross-sectional secondary analysis of data	N= 2968	bivariate analysis	Anticipation of career advancement accepted as a primary motivation for joining the conversion program.

					Quantitative review			
7.	Hylton (2005) Relearning how to learn: Enrolled nurse transition to degree at a New Zealand rural satellite campus	Peer reviewed article. Research study	Strauss and Corbin (1990).	Examine the factors that assisted or hindered transition of enrolled nurses working in rural settings, the majority of whom were Maori, to continue working while studying at a small satellite campus	exploratory, descriptive, qualitative approach, utilizing focus groups	Initially separate student (n=10) and educator (n=6) focus groups, second student (n=10) focus group.	Data was analysed using the constant comparative analysis method associated with grounded theory and referred to by Strauss and Corbin (1990).	ENs confronted numerous adversities in their conversion. Struggle to balance education, work, and family responsibilities. Difficulty adapting to educational demands including ICT, critical thinking, and scholarly writing requirements. Challenges adopting student role. Support from academics important. Self-esteem grew from academic success.
8.	Kenny and Duckett (2005) An online study of Australian Enrolled Nurse conversion.	Peer reviewed article.		exploring the reasons why rural Enrolled Nurses have chosen to convert to level 1 of the nursing register.	Online FGD with Enrolled Nurses undertaking a conversion program	n=38	Interpretive analysis of qualitative data.	Financial cost including program, childcare and loss of paid work disincentives to undertake conversion. Struggle to balance study, work, and domestic responsibilities. Perceived disapproval from some former EN colleagues. Scope of practice broadened as RNs.
9.	Dearnley (2006) Knowing nursing and finding the professional voice: a study of enrolled nurses converting to first level registration.	Peer reviewed article.	Belenky et al. (1986) and Maslow (1962, 1968, 1970).	Examine the relationship between the mode of course delivery and the personal and professional development experienced by the learners.	phenomenological paradigm	16 women and 2 men	constant comparative analysis	Trouble acclimatizing to educational demands as well as necessity for self-direction in study and embracing the student role. Concurrently working as an EN increased academic challenges. Self-esteem grew from academic success.

10.	Rapley et al. (2006) EN to RN: The transition experience pre- and post-graduation.	Peer reviewed article. Original research.		Describe the transition experiences of rural and metropolitan enrolled nurses undertaking an external tertiary level course after receiving considerable advanced standing, regardless of educational background	descriptive qualitative study interviews	recent graduates from the EN-to-RN pathway	Data from the transcripts were analysed using a grounded theory approach	The transition experiences for participants in the external conversion degree program are generally positive although, Transition to student status is stressful. Difficulty adapting to academic demands including academic writing and critical thinking requirements. Challenges adopting student role. Valued social connections with other ENs and support from family and friends. Self-esteem grew from academic success.
11.	Suttle and McMillan (2009) LPN to RN: a win-win situation for nursing education.	Peer reviewed article. Discussion paper.		Discuss the design and introduction of a tailored LPN to RN program.	Narrative discussion, review			Struggle to balance study, work and domestic responsibilities. Discussion of programs developed by one community college (Jones County Junior College in Ellisville, Mississippi) that developed two innovative ways to assist working LPNs to advance to the role of the RN.
12.	Cook et al. (2010) Returning to school: The challenges of the licensed practical nurse-to-registered nurse transition student	Peer reviewed article. primary research	Theoretical Framework not detailed	Explore the characteristics and experiences of LPNs within a conversion to RN program.	Survey questionnaire	(n=79).	Analytical method not detailed.	Returning to school presents many challenges, and this study reports the issues faced by students at a mid-Atlantic community college. Struggle to balance study, work and domestic responsibilities. Difficulty adapting to academic demands including self-directed learning requirements.
13.	Melrose and Gordon (2011) Overcoming barriers to role transition during an online post	Peer reviewer article	guided by Kelly's (1991/1995) psychology of persona	Explore the experiences of LPNs within a conversion to RN online program.	Qualitative longitudinal study, interviews	Student interviews (n=10) at three stages over three years of program.	Descriptive analysis of qualitative data,	Challenging to make equilibrium for employment and education. Disadvantaged by recognition of prior learning (RPL) due to lack of academic foundation. External program mode amplified educational challenges. Strategies for success encompassed workplace mentors, personal learning goals and prioritizing time management.

	LPN to BN program		1 constructs.					
14.	Gordon, K. P., Melrose, S., Janzen, K. J., & Miller, J. (2013). Licensed Practical Nurses becoming Registered Nurses: Conflicts and responses that can help.	Peer reviewed article		Describe LPN to RN student nurses' experiences with professional socialization as they learned a more complex nursing role.	Qualitative FGDs (4)	27 LPNs	thematic analysis	LPN's were not respected, their nursing knowledge was not acknowledged and it was challenging for them to feel a sense of belonging with the RN community.
15.	Lakati et al. (2012) Barriers to enrolment into a professional upgrading programme for enrolled nurses in Kenya.	Peer reviewed article. Primary study		Identify barriers that hindered enrolment into the AMREF ECHN-RN programme.	Descriptive cross-sectional design. Survey	Sample of 532 ECHNs, got 490.	Descriptive statistics.	Awareness of the upgrading programme was high. The cost of upgrading programme, age and working in a faith-based health facility were the main barriers to enrolment. Intervention that fund nurses to upgrade would increase nurse enrolment.
16.	Ralph et al. (2013) From EN to BN to RN: an exploration and analysis of the literature.	Peer reviewed article. Critique literature		Exploring the experiences of ENs within a conversion to RN program, and as a graduate RN.	Qualitative meta-synthesis of the literature from 1997 to 2011	(n=24).		Difficulty adapting to academic demands including critical thinking, IT and academic writing requirements. Academic challenges may be influenced by mode of EN training and clinical experience. Cautions application of RPL. Struggle to access institutional support. Self-esteem grew from academic success. Those who choose to advance should be supported and prepared to ensure success.
17.	Tower et al. (2015) Exploring the transition experiences of	Peer reviewed article.		What are the transition experiences of students with previous nursing qualifications	Integrative review of the literature from	(n=14).	Grounded theory analysis of qualitative data guided by Whittemore	Struggles assuming the student role. Challenged to balance study, work and domestic responsibilities. Targeted educational support vital. Custom-made orientation course and creation of mentor groups acknowledged to be useful.

	students entering into preregistration nursing degree programs with previous professional nursing qualifications.	Critique the literature : An integrative review		(non-degree qualifications) entering into a nursing degree program’.	1993 to 2014		and Knafl (2005).	
18.	Kithuci et al. (2017) Factors influencing educational upgrading of nurses at a regional referral hospital in Kenya	Peer reviewed article. Primary study			Descriptive cross-sectional survey.	N= 160 nurses Level not defined. Some were still EN, while others had enrolled and others finished the program.	Descriptive statistics.	Better remuneration, promotion, availability of flexible modes, the institution being near nurse’s residence, desire for empowerment, career progression, to acquire more knowledge and skills, desire to actualize and to boost one’s self-confidence and self-esteem were the main factors brought out in the research that influenced nurses to upgrade.
19.	Wall et al. (2018) Understanding the enrolled nurse to registered nurse journey through a model adapted from Schlossberg's transition theory	Peer reviewed article Synthesis of the literature	Schlossberg's Transition Theory	explore the experiences of ENs undertaking a program of study to convert to RN.	A narrative review	EN articles. Target was former ENs.	Acknowledges the importance of the new step that the study was adding to the Schlossberg transition theory.	presents a four stage model, that reflects the experiences of ENs in their transition to RN. Identifies the elements within each stage and can assist educators develop strategies and provide educational resources to enhance the EN journey.
20.	Allan, I., & McLafferty, I. (2001). The perceived benefits of the enrolled nurse conversion course on professional and academic advancement.	Peer reviewed article		Evaluated whether students perceived changes in their knowledge, skills and attitudes following conversion and if they were able and prepared to	Survey approach using open ended question naire	ENs who had completed a conversion course. Convenience sampling. 301 sent out and 172 were returned, response rate of 57%	Frequency distribution and descriptive statistics	Positive changes in knowledge skills and attitudes following a conversion course. ENs perceive enormous benefit from a conversion course. More acceptance of lifelong learning as evidenced by post conversion educational advancement.

				take advantage of opportunities for post registration studies. ENs' perceptions of conversion				
21.	Hill, Y., & MacGregor, J. (1998). An enrolled nurse conversion course: does it make a difference?	Peer reviewed article	Life-span theory of Super (1981)	Investigated the effect of a conversion course on the careers of enrolled nurses.	Mixed methods. Survey and interviews. Does not clarify if sequential or not.	Survey 130 ENs, 8 semi-structured interviews with eight nurses and one manager. Out of the 130 only 89 returned the questionnaire hence response rate of 68%	Descriptive statistics for survey and thematic analysis for interviews.	Following completion, participants identified changes in grade, job and further study. Identified developmental change in their personal and professional life.
22.	Nartker, A. J., Stevens, L., Shumays, A., Kalowela, M., Kisimbo, D., & Potter, K. (2010). Increasing health worker capacity through distance learning: a comprehensive review of programmes in Tanzania.	Peer reviewed article		Reviewed and assessed Tanzania distance learning programmes for health care workers, as well as those in countries with similar human resource challenges, to determine the feasibility of distance learning to meet the need of an increased	Mixed methods; survey, focus group, structured interviews and on-site observation	25 distance learning programmes (including EN-RN). Data collected from programme managers, tutors, students, and information technology (IT) specialists. Total of 125.	Descriptive statistics and narrative themes.	Recommended the blended print-based distance learning model due to resource and infrastructure constraints.

				and more skilled health workforce				
23.	Lovett, Wanda Gidman, Janice (2011) Reflecting on the learning experiences of student nurses in rural Uganda	Peer reviewed article Reflective paper	-	Mentorship for translating theory to practice	Qualitative Case study	-	Reflective synthesis	Ugandan nurse education is pedagogic and didactic and does not provide adequate opportunities for translating theory to practice
24.	Boelen, M. G., & Kenny, A. (2009). Supporting enrolled nurse conversion–The impact of a compulsory bridging program.	Peer reviewed article		Confidence levels regarding returning to study, before and after the bridging AP&C program. Confidence levels regarding knowledge base in the biological sciences, before and after the bridging AP&C program. Program delivery	Survey	70	Descriptive statistics.	one-week bridging anatomy, physiology and chemistry (AP&C) program for enrolled nurse conversion students improved students self confidence in their return to study. This was among a university degree program target population of ENs-BSN. It was not answered if the same was for EN-RN programs. The problems among EN-BSN may be different for EN-RN.
25.	Hutchinson, L., Mitchell, C., & St John, W. (2011). The transition experience of enrolled nurses to a bachelor of nursing at an Australian university.	Peer reviewed article	Lizzio's (2006) Five Senses of Success Model	Transitional barriers faced by ENs articulating to the second year of a BN program and the processes employed to adapt to the university learning environment.	qualitative study, FGD	10	Lizzio's (2006) Five Senses of Success Model provided a framework for data analysis.	ENs receiving credit for the first year of the BN face additional challenges to other commencing students and employ a variety of strategies to cope with their transition to the BN, thus highlighting their specific transitional needs. Need to address professional issues such as the implicit differences in the practice of ENs and RNs,

26.	Parry, R., & Cobley, R. (1996). How enrolled nurses feel about conversion.	Peer reviewed article		Perception of ENs about conversion	Survey	90	Descriptive statistics	Concerned about the bleakness of their future.
27.	Webb, B. (1999). Meeting the challenge of recruitment to enrolled nurse conversion courses.	Peer reviewed article		Discussing the history and current position of enrolled nurse conversion nationally and within the context of one particular community NHS Trust	Evaluation and Reflection	30		Supportive mechanisms needed to support ENs.
28.	Webb, B. (2001). An exploratory study in a community National Health Service Trust to understand why enrolled nurses choose not to convert to first-level registration.	Peer reviewed article		Factors preventing ENs from advancing to RN. How could the conversion course be improved to encourage ENs to access it	FGDs	43 but only 13 attended. They were mixed including those ENs who were currently converting to RN and those who were not on a conversion course.	Thematic analysis	Family commitments, fear of the course rigors, lack of awareness on scholarship availability.
29.	Foong, A. L., & MacKay, G. F. (1996). An exploration of the psychosocial perspectives on educational/developmental opportunities for enrolled nurses: the forgotten	Peer reviewed article		Preliminary identification of psychosocial factors experienced by enrolled nurses as a result of the phasing out of their qualification.	Qualitative interview	randomized sample of 30 enrolled nurses from five different hospitals		Phasing out the EN was associated with a sense of loss, frustration, disappointment and dissatisfaction. EN transition issues should not be overlooked. Transition period was difficult and available support minimal.

	species?. Nurse education today, 16(2), 94-97.							
30.	Bigirwa, J. P., Ndawula, S., & Naluwemba, E. F. (2020). E-learning adoption: Does the instructional design model matter? An explanatory sequential study on midwifery schools in Uganda.	Peer reviewed article	Two theories of e-learning uptake and continued use in higher education institutions (Pinpathomrat et al., 2013). Institutional theory (Puffer and McCarthy, 2015; Selznick, 1996)	does the instructional design model matter in advancement education	Mixed methods. Explanatory sequential study	10 schools were sampled with 224 participants.	linear regression analysis	instructional design had a significant influence on e-learning adoption, key salient traits included: choosing an appropriate instructional design model to guide the entire e-learning process, interactivity of e-learning materials, collaborative working in developing and updating e-learning materials, eliciting feedback on instructional materials, and engaging in more than one e-learning activity. Current instructional design of the e-learning not well embraced.

Appendix 5: FGD guide

Objective: Explore the experiences, aspirations and needs of ENs with respect to advancing their nursing careers in Uganda.

1. Opening questions
 - a. What nursing cadre do you hope to ever advance to?
2. Introductory questions
 - a. What do you think are some important considerations with respect to career advancement of ENs?
3. Transition questions
 - a. How would you want career advancement of ENs to be structured?
4. Exploration/Key questions
 - a. How would you describe your experience in seeking career advancement?
 - i. What were the best moments and what were the challenge ones?
 - ii. How do you feel about the experience?
 - iii. What are your the reasons for not having advancement to the RN level, by now?
 - b. As an EN, what aspirations have you had, regarding career advancement?
 - i. Where do you see yourself in the next five years?
 - ii. What expectations do you find realistic and unrealistic?, and why?
 - c. What are your career advancement needs?
 - i. What might facilitate/promote your career advancement to the RN?
 - ii. What might hinder or make difficult your career advancement to the RN?
5. Ending questions
 - a. With respect to advancing your nursing careers, is there anything else you would like to say about your:-
 - i. Experiences
 - ii. Aspirations
 - iii. Needs

Appendix 6: Questionnaire

Questionnaire to explore the experiences, aspirations, needs, barriers and enablers of enrolled nurses with respect to advancing their educational career to RN.

Dear Colleagues

Thank you for the interest to participate in this study designed to explore the experiences, aspirations, needs, barriers and enablers of enrolled nurses with respect to advancing their educational career to RN level. Data for this study will be collected from enrolled nurses like you. The findings of this study will help build better mechanisms that can support educational advancement for enrolled nurses. Your participation in this study is totally voluntary and very important to the success of this project. Your personal identifying information will not be used in any way in the study. The information you share will be held confidentially. Results will be aggregated and reported at group levels; hence no individual responses will be reported. You have the right to withdraw from completing the questionnaire at any point and there will be no consequences for that. The researchers thank you for your participation. If you have questions about the research or would like to receive a copy of the executive summary of the completed project, please email Joseph Mwizerwa at joseph.mwizerwa@aku.edu or call 0772749494.

Instructions

There are six sections of the questionnaire. Please complete all items as they best apply to you.

In the first section, titled Demographics, please mark the response that best describes you.

In the second and third sections, titled Motivations and Barriers, please mark the response that best describes your level of agreement with the items listed in the far-left column. Responses range from „Strongly Disagree” to “Strongly Agree”. If an item does not apply to you, please mark “Not Applicable.”

In the fourth section, titled Additional Remarks, please write any additional information that you feel would be helpful to the researchers in understanding the career advancement for enrolled nurses.

Questions

Section 1: Demographics.

Please select the response that best describes you or your situation.

1. What is your sex?
 - a. Female
 - b. Male

2. What is your age in complete years?
.....

3. What is your marital status?
 - a. Single without child
 - b. Single with child/children
 - c. Living with partner
 - d. Married (introduced or wedded)
 - e. Divorced or separated
 - f. Widow

4. How many biological children do you have?
.....

5. Do you have any dependents you are taking care of or staying with?
 - a. Yes
 - b. No (if no, go to question 8)

6. If yes, how many?
.....

7. Who are these dependents? Tick all that apply.
 - a. Siblings (your brothers or sisters)
 - b. Parents
 - c. Other relatives (aunties, uncles, children of my siblings and/or spouse, cousins)
 - d. Legally adopted children
 - e. Other, specify

8. Which year did you complete the EN/ECN course?
.....

9. Have you pursued another formal qualification lasting over one year, after completing EN/ECN?
- a. Yes
 - b. No

10. If yes state the qualification.

.....

11. What is the current region of your workplace?

- a. Central
- b. North
- c. East
- d. West

12. What is the category of institution where you are working?

- a. Government
- b. PNF (Private Not For Profit)
- c. PFP (Private For Profit)
- d. Self-employed in healthcare field
- e. Doing non nursing work (specify)
- f. Other (specify).....

13. What is the level of facility where you currently work or (last worked if not currently working)?

- a. Health Centre II (HCII)
- b. Health Centre III (HCIII)
- c. Health Centre IV (HCIV)
- d. General Hospital/district hospital (level 5 hospital)
- e. Regional Referral Hospital (RRH) (level 6 hospital)
- f. National Referral Hospital (NRH)
- g. Small private clinic or nursing home (equal to or smaller than HCIII)
- h. Big private clinic (about the size of HCIV)
- i. Small private hospital (about the size of level 5 hospital /district hospital)
- j. Big private hospital (greater than level 5 hospital/district hospital)
- k. Drug shop
- l. Pharmacy
- m. Nursing school or any other school or educational institution
- n. Non-Government Organisation (NGO)
- o. Other.....

14. What is your position at the place where you work?
 - a. Staff nurse
 - b. Ward In-charge
 - c. Facility manager
 - d. Other, specify.....

15. What is your personal monthly net income/salary from your main formal nursing job, in Uganda Shillings?

.....

Section 2: Experiences, aspirations and needs

16. Do you currently aspire (want/seriously consider) to upgrade to RN level?
 - a. Yes (If you select this option, proceed to question 20)
 - b. No

17. If No, have you ever wanted to upgrade to RN level?
 - a. Yes (If you select this option, proceed to question 19)
 - b. No (If you select this option, proceed to question 18)

18. If no, is there any reason why you are not and have never been interested in advancement to the RN? (after answering proceed to question 24)

.....

.....

.....

19. For how long (number of years) did you have this consideration?

.....

20. Why do (or did) you want to upgrade? (What are your aspirations for advancing your nursing career to RN level?) Tick all that apply.
 - i. More knowledge and skills
 - ii. Better salary
 - iii. Better incentives and benefit
 - iv. Increased flexibility of work
 - v. Better working conditions
 - vi. Increased motivation for clinical practice
 - vii. Fear of phasing out ENs
 - viii. Enhanced job satisfaction
 - ix. Esteem and status building/ Increased respect at family, work and community
 - x. Change of uniform

- xi. Sense of fulfillment and realizing a lifetime goal
- xii. Promotion/job requirement
- xiii. Other.....
-
-
-

21. What has been your experience in seeking career advancement to RN?

- i. Worrying
- ii. Frustrating
- iii. Sadness
- iv. Challenging
- v. Other.....
-
-
-

22. What have been your needs with respect to advancing your nursing career to RN? (tick the best 3 that apply to you)

- i. Paid study leave
- ii. Tuition support or scholarships
- iii. Flexible study program
- iv. Flexible and supportive working designs
- v. Favorable policies and procedures for admission
- vi. Career guidance
- vii. Childcare and support
- viii. Spouse support
- ix. Program that recognizes adults and treats them maturely
- x. Other.....
-
-
-

23. If you are currently considering upgrading to the RN level, for how long have you had this idea? (Duration in years).

.....

Section 3: Barriers to educational advancement.

Please select your level of agreement with each of the following statements, regarding barriers for enrolling into RN level education. If the item does not apply to you, please select “not applicable.”

	Item	Strongly disagree	Dis-agree	Not sure	Agree	Strongly Agree	Not applicable
24.	A lack of confidence in my ability is a barrier to my advancement to the RN level						
25.	My personal health concerns are a barrier to my advancement to the RN level						
26.	Concern about attending school with younger students is a barrier to my advancement to the RN level						
27.	Lack of technological and computer skills are a barrier to my advancement to the RN level						
28.	Lack of time is a barrier to my advancement to the RN level						
29.	My income and personal finances are so low that I cannot afford to sponsor my education to the RN level.						
30.	The lack of scholarships or bursaries for tuition fees is a barrier to my advancement to the RN level						
31.	Concern about going into debt is a barrier to my advancement to the RN level.						
32.	The need to focus on taking care of my child/children is a barrier to my advancement to the RN level.						
33.	My spouse is a barrier to my advancement to the RN level						
34.	Concern about supporting family relatives is a barrier to my advancement to the RN level						
35.	My role as a primary health caregiver for family members is a barrier to my advancement to the RN						
36.	My work-based supervisor or employer is not supportive of my advancement to the RN level						
37.	Understaffing at my workplace is a barrier to my advancement to the RN level						

38.	Lack of study leave with pay from my job is a barrier to my advancement to the RN level						
39.	Lack of flexible work schedule from my employer is a barrier to my advancement to the RN level						
40.	Ban on advancement imposed by district or employer is a barrier to my advancement to the RN level						
41.	Lack of a flexible study program convenient for working nurses is a barrier to my advancement to the RN level.						
42.	The two year waiting time requirement was a barrier to my advancement to the RN level.						
43.	Difficulty in dealing with admission processes and requirements is a barrier to my advancement to the RN level.						
44.	The lack of an RN study program/school within my locality or reasonable distance, is a barrier to my advancement to the RN level						
45.	The high cost of tuition fees is a barrier to my advancement to the RN level.						

46. Are there any additional barriers that you face in your decision to advance to the RN level that we have not talked about?

- a. Yes
- b. No
- c. Not sure

47. If yes, please identify them.

.....

.....

.....

.....

48. What would you say is the best time/period/season for an EN to upgrade to RN after finishing EN education?

- a. Immediately and within the first 2 years after EN education
- b. 3-5 years after finishing EN education
- c. 6-10 years after finishing EN education
- d. Over 10 years, after finishing EN education

Section 4: Facilitators (facilitating factors) for educational advancement.

Please select your level of agreement with each of the following statements regarding facilitating factors for enrolling into RN study program.

	Item	Strongly disagree	Dis-agree	Not sure	Agree	Strongly Agree	Not applicable
49.	Study leave with pay can facilitate me to advance to the RN level						
50.	Tuition fees contribution from my employer can facilitate me to advance to the RN level						
51.	Other financial/material support from my employer can facilitate me to advance to the RN level						
52.	Permission from my employer to work flexible schedules can facilitate me to advance to the RN level.						
53.	Permission from my employer to enroll in a study program can facilitate me to advance to the RN level.						
54.	Encouragement from my supervisor or employer facilitates me to advance to the RN level.						
55.	Financial/material support from my spouse or other significant family members facilitates me to advance to the RN level						
56.	Access to student loans for tuition fees can facilitate my advancement to the RN level.						
57.	Encouragement from my spouse or other significant family members facilitates me to advance to the RN level.						
58.	Transport facilitation to school can facilitate me to advance to the RN level.						
59.	Availability of flexible RN programs near me can facilitate my advancement to the RN level.						
60.	Instalment payment system for tuition can facilitate me to advance to the RN level.						
61.	Baby/childcare facilities at the nursing school can facilitate me to advance to the RN level.						
62.	Being treated as a mature individual can facilitate me to advance to the RN level.						

63.	All year-round application and admission opportunity can facilitate me to advance to the RN level.						
64.	Support in dealing with admission processes and requirements can facilitate me to advance to the RN level.						
65.	Removal of the 2 years waiting time before one becomes eligible for the RN admission after completion of EN/ECN program would have facilitated me to advance to the RN level.						
66.	Fulltime access to internet can facilitate me to advance to the RN level.						
67.	A short program duration (one year) can facilitate me to advance to the RN level.						
68.	Accommodation as and when needed can facilitate me to advance to the RN level.						

69. Are there additional facilitating factors that you would have considered to support your advancement to the RN level?

- a. Yes
- b. No

70. If yes, please identify them

.....

Section 5: Flexible education designs.

Answer by selecting your most appropriate choice.

71. With or without study leave, which one of the following is your preferred education design for advancing to RN level?

- a. Full time Monday to Friday, as you work chronic night.
- b. Few days per week (between Monday to Friday) with negotiated permission from employer
- c. Evenings (Monday to Friday)
- d. Weekends
- e. Block (one week every month OR one month every quarter)
- f. Mix online (e-learning) with face-to-face.
- g. Other.....

72. If you have study leave, which one of the following is your preferred education design for advancing to RN level?
- a. Full time, Monday to Friday and boarding (staying in school during the week and over the weekend).
 - b. Full time, Monday to Friday and boarding (with freedom to go home over the weekend)
 - c. Full time Monday to Friday and not boarding (not staying within school premises)
 - d. Mix online (e-learning) with face-to-face.
73. If you do not have study leave, which one of the following is your preferred education design for advancing to RN level?
- a. Full time Monday to Friday, as you work chronic night.
 - b. Few days per week (between Monday to Friday) with negotiated permission from employer
 - c. Evenings (Monday to Friday)
 - d. Weekends
 - e. Block (one week every month OR one month every quarter)
 - f. Mix online (e-learning) with face-to-face.
 - g. Workplace based education design in collaboration with employer
74. Which of the following education design innovations would you like to be added to the menu of nursing education? Select only two that best fit you.
- a. Work-based programs in partnership with a nursing school or university
 - b. Pure online with no face-to-face classes
 - c. Mixture of online with some face-to-face classes
 - d. EN-RN-BSN nonstop (Certificate to Diploma to Degree).
75. Is there any other education design you desire when advancing to RN level, which is not listed above?
- a. Yes
 - b. No
76. If yes, please describe it (education design) in the space below.

.....
.....
.....

Section 6: Online learning readiness.

Please select your level of agreement with each of the following statements indicating how ready you would be to take on online learning, when seeking RN level.

	Item	Strongly disagree	Dis-agree	Not sure	Agree	Strongly Agree	Not applicable
77.	I have access to a working computer at home.						
78.	I have access to internet connection for my computer at home.						
79.	I have access to a computer with adequate application software (e.g., Microsoft office, Adobe Acrobat reader, web browsers etc.).						
80.	I have the basic skills to operate a computer (e.g., saving files, creating folders, retrieving files).						
81.	I have the basic skills for finding my way around the Internet (e.g., using search engines, entering passwords)						
82.	I am comfortable and knowledgeable on how to use online tools (e.g., email, chat, downloading videos, etc.)						

The end: Thank you.

Name of Research Assistant

Signature of Research Assistant.....

Date of filling the questionnaire

Appendix 7: Semi structured in-depth interview guide.

Objective: 3. Examine the suitability of EN advancement programs in meeting their education needs.

School category of ownership i.e. PNFP/ PFP/ gov't:.....

Program:.....

Position of interviewee:.....

1. Can you please tell me about the EN advancement program that you have.

Situational factors

2. Who is the target niche for your EN-RN program?
3. What is their usual background regarding employment, children and parenting obligations, spouses, and family commitments?
4. How do they handle the issue of study leave?
5. For those who don't get study leave, how do they handle their employment?
6. How easy is it for them to make the decision to enrol into your program?
7. Who pays their tuition, upkeep and other expenses?
8. How would you describe their experience of going through the fulltime EN advancement program?
9. What situational/individual and work factors are you aware of, that may prevent some ENs from enrolling into your program?
10. How could these situational/individual and work factors be solved to support those ENs who fail to enrol?

Institutional factors

11. Do you think there may be some institutional (school based) factors, which may prevent some ENs from enrolling? What could these be?
12. How could these factors be solved to support those ENs who fail to enrol?
13. How flexible is the school fees payment schedule?
14. Do you think there may be some working ENs who may want to join your EN advancement program? How do you think they can join the program?
15. How flexible is your program for working, parenting, non-residential and distantly placed ENs?
16. How do you handle students that may experience financial challenges?

Dispositional factors

17. Are you aware of any attitudinal and perceptual barriers that may hinder some ENs from joining or make difficult the experience of those already in the program?

10.11. How could these attitudinal and perceptual barriers be solved to support those ENs?

Exiting question

18. If you have any closing ideas that you may want to put forward, regarding the suitability of your program in meeting EN education advancement needs, please indicate them in space below.

Appendix 8: Panel of experts for content validity

1. Rose Chalo Nabirye. PhD, MPH, ADHSM, RN/M
Dean, School of Health Sciences, College of Health Sciences
Makerere University, Kampala, Uganda.
Rose has also been research active in the area of nursing education.
2. Annet kabanyolo. MSN, ADHSM, BSN, RN, EN.
Dean School of Nursing, Kampala International University
Kampala, Uganda.
3. Mark Kalanzi. MSN, MHSM, BSN, RCN.
Principal Hoima School of Nursing and Midwifery
Hoima, Uganda.
4. Yedidah Sentongo RN, BSN
Principal Butabika school of psychiatric nursing
Kampala, Uganda.
5. Robinah Nakijoba MSc educ. Mgt., BME, RM, EM
Principal, Kampala University School of Nursing and Midwifery
Kampala, Uganda.

Appendix 9. Oyam letter



THE AGA KHAN UNIVERSITY

DISTRICT HEALTH OFFICER
OYAM DISTRICT
12 JUN 2019
Please
Provide necessary info to the student
11.6.2019

May 30, 2019

To the DHO, Executive Director, Director Medical Director Medical Superintendent

Dear Sir/Madam

Highly recommended.
The nursing staff should provide the necessary information required
Amussen
11/06/2019

RE: Request to access and recruit enrolled nurses for a Focus Group Discussion

I'm a Ugandan nurse PhD student at the University of Salford in the United Kingdom. I am interested in studying how to improve academic career advancement of Enrolled Nurses (ENs). The study hopes to contribute new knowledge on the appropriate framework for ENs' academic advancement in a developing country context. The study is organized in five phases. Phase one is a Focus Group Discussion with selected enrolled nurses/ enrolled comprehensive nurses.

The study has been approved by the Uganda National Council for Science and Technology (UNCST), the THETA Research Ethics Committee and the University of Salford Health Research Ethics committee.

I'm seeking your permission so that I can discuss with the nursing leadership to allow me access and talk to your enrolled nurses/ enrolled comprehensive nurses about the study so that I can select ¹⁰..... of them to participate in a Focus Group Discussion that will take place on ^{12/06/19}.....for a duration of two hours. Taking part is voluntary. The Venue will be ^{ADHO's office}.....

I appreciate your time and support.

Yours sincerely

Joseph Mwizerwa
Principal Investigator; email joseph.mwizerwa@aku.edu telephone 0772749494.

CHIEF ADMINISTRATIVE OFFICER
11 JUN 2019
OYAM DISTRICT LOCAL GOVERNMENT

Appendix 10: Participant recruitment letter.

I'm a Ugandan PhD student at the University of Salford in the United Kingdom. I am interested in studying how to improve educational career advancement of enrolled nurses (ENs). The study hopes to address an existing gap in educational advancement of ENs. It will contribute new knowledge on the appropriate framework for ENs' educational advancement in a developing country context. The study is organized in three phases with participant involvement sought in all of the phases.

Participants are invited to get involved in any of the study phases. You are invited to participate in this study by filling a survey questionnaire or attending an interview or Focus Group Discussion. You have been selected randomly or purposively. The study will involve 523 participants of which 493 will be ENs and 30 relevant stakeholders (Principals, regulators, employers/work-based supervisors and professional associations).

The researcher anticipates that filling the questionnaire may take about 15 minutes, while the interview may take one hour and the FGD two hours.

Taking part in any of the study phases is voluntary. The information you provide will be held secure in the best way practically possible. There are no anticipated risks to you if you participate in this study. Information you give may help in improving how education programs for working enrolled nurses may be designed in the future to improve access.

If you wish to participate or need more information, please contact the principal investigator on below contact.

Contact: Principal Investigator name, joseph mwizerwa; email joseph.mwizerwa@aku.edu telephone 0772749494.

Researcher affiliation: I work at Aga Khan University, School of Nursing & Midwifery, Uganda.

Accreditation: Before commencing the study, it will have to be approved by the relevant ethics committees.

Appendix 11: Participant information Sheet Focus Group Discussion.

March 3rd, 2019, version 3

Study Title: Strengthening educational advancement for Enrolled Nurses: Developing a new program framework for ENs in Uganda. The objective of this phase of the study is to explore experiences, aspirations and needs of ENs with respect to advancing their nursing careers in Uganda.

Invitation

I'm a Ugandan nurse PhD student at the University of Salford in the United Kingdom. I am interested in studying how to improve educational advancement of enrolled nurses.

You are invited to participate in this study by participating in a focus group discussion (FGD). You have been selected purposively. The researcher anticipates that each FGD will involve 10 enrolled nurses and may take about 1.5-2 hours. Your contribution through the FGD will be useful in exploring experiences, aspirations and needs of ENs with respect to advancing their nursing careers in Uganda.

Aim of the Study

The objective of this study is to explore experiences, aspirations and needs of ENs with respect to advancing their nursing careers in Uganda.

Do I have to take part?

Taking part in this study is completely voluntary. If you choose to be in the study you can withdraw at any time without consequences of any kind and you can also choose not to answer any question directed to you during the discussion without undue consequence.

What will happen to me if I take part in the research?

If you agree to participate in the study, you will be required to participate in a FGD that will be scheduled within your locality. The FGD will take place at a central location in a hospital or venue closest to your workplace within your district. Arrangements will be made to access a quiet room where a convenient round seating will be organized. The exact location will be communicated to you before

the interview. The duration of the FGD is expected to be between 1.5-2 hours and will be audio-recorded.

During the interview you will be served with drinking water and a light snack.

Expenses and Payments?

Any transport expenses incurred (to & from) will be reimbursed at the public transport rate. The research team anticipates that there will be no other cost incurred to you in relation to the research.

What are the possible disadvantages and risks of taking part?

There are no anticipated risks to you if you participate in this study.

What are the possible benefits of taking part?

Information you give may help in improving how education programs for working enrolled nurses may be designed in the future to improve access.

What if there is a problem?

If you have a concern about any aspect of this study, you should contact the researcher (Joseph Mwizerwa, contact number 0772749494) or email joseph.mwizerwa@aku.edu who will do their best to answer your questions. If you remain unhappy and wish to complain formally you can do this by contacting the Research Supervisor (Paula Ormandy) on contact 0161 295-0453 or Email: p.ormandy@salford.ac.uk number). If the matter is still not resolved, please forward your concerns to Professor Susan McAndrew, Chair of the Health Research Ethical Approval Panel, Room MS1.91, Mary Seacole Building, Frederick Road Campus, University of Salford, Salford, M6 6PU. Tel: 0161 295 2778. E: s.mcandrew@salford.ac.uk

Will my taking part in the study be kept confidential?

The information you provide will be held secure in the best way practically possible. All records will be kept under lock and key. Computer records will be password protected. Data will be stored for a minimum of 3 years. The analysis and discussion of transcripts will use quotes from the FGD transcripts, but will not use your names or any personal identifying information. The research team will be the only one having access to these records. No findings in this study will be linked to individual respondents.

What will happen if I do not carry on with the study?

You can decide to stop participating at any time. However, your contribution up to the point of withdrawal will remain part of the study.

What will happen to the results of the research study?

The results of the research study will form part of my thesis. When possible, the results will also be published. Where possible they will also be presented in as many Ugandan nursing forums as possible. The outcome of the study will serve as a guide for nurse educators, regulators and the policy makers, all intended to support EN educational advancement. It may also form a basis for future research.

Who is organising or sponsoring the research?

Currently there is no sponsor for the research. However, my employer, Aga Khan University, school of nursing and midwifery in Kampala, Uganda, covers the tuition of my course.

Further information and contact details

Principal Investigator: Joseph Mwizerwa

Telephone number: 0772749494

Address: P.O. Box 8842 Kampala Uganda.

Email address: joseph.mwizerwa@aku.edu

Appendix 12: Consent Form for Focus group discussions and Interviews

March 3rd, 2019, version 3

Please tick the appropriate boxes	Yes	No
Taking Part		
I have read and understood the project information sheet dated March 3rd, 2019, version 3.	<input type="checkbox"/>	<input type="checkbox"/>
I have been given the opportunity to ask questions about the project.	<input type="checkbox"/>	<input type="checkbox"/>
I agree to participate in a Focus group discussion or Interview and for this to be audio-recorded.	<input type="checkbox"/>	<input type="checkbox"/>
I agree to keep what is discussed in the group confidential.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that my taking part is voluntary; I can withdraw from the study at any time, and I do not have to give any reasons for why I no longer want to take part.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that if I do decide to withdraw, my contribution up to the point of withdrawal will remain part of the study.	<input type="checkbox"/>	<input type="checkbox"/>
Use of the information I provide for this project only		
I understand my personal details such as phone number and address will not be revealed to people outside the project.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that my words may be quoted in publications, reports, web pages, and other research outputs.	<input type="checkbox"/>	<input type="checkbox"/>
Please choose one of the following two options:		
I would like my real name used in the above	<input type="checkbox"/>	
I would not like my real name to be used in the above.	<input type="checkbox"/>	
Use of the information I provide beyond this project		
I agree for the data I provide to be archived at the UK Data Archive. ²	<input type="checkbox"/>	<input type="checkbox"/>
I understand that the data that will be kept by UK Data Archive will be anonymised data.	<input type="checkbox"/>	<input type="checkbox"/>
So we can use the information you provide legally		
I agree to assign the copyright I hold in any materials related to this project to [Joseph Mwizerwa].	<input type="checkbox"/>	<input type="checkbox"/>

Name of participant [printed] Signature Date

Researcher [printed] Signature Date

Project contact details for further information: Names, phone, email addresses, etc.

Joseph Mwizerwa. PhD Student University of Salford, School of Health & Society. Mobile tel: 0772749494, Email: joseph.mwizerwa@aku.edu

Contact for Ethics chair:

Notes:

1. Other forms of participation can be listed.
2. More detail can be provided here so that decisions can be made separately about audio, transcripts, etc.

I agree to be audio recorded during the group discussion/interview (Tick what applies).

Name of participant [printed] Signature Date

Researcher [printed] Signature Date

Appendix 13: Letter seeking Permission to Access Enrolled Nurses contacts

July 9, 2018

The Registrar

Uganda Nurses and Midwives Council

Dear Madam,

RE: ACCESS TO ENROLLED NURSES CONTACT INFORMATION.

Greetings.

I am a Phd student at University of Salford in the UK. I enrolled for this study program in 2017. My study project is looking at 'Strengthening academic advancement for Enrolled Nurses: Developing a new program framework for Enrolled Nurses in Uganda.' This is spread into 4 phases. In the first phase I'm interested to explore two of the four objectives which are:-

1. Explore experiences, aspirations and needs of Enrolled Nurses with respect to progressing their nursing careers in Uganda.
2. Identify the barriers and facilitators for academic advancement of Enrolled Nurses within Uganda.

In order to make progress with this study I will need access to contact information of Enrolled Nurses. I hope to use their roll as the sampling frame to extract an estimated sample of about 850 Enrolled Nurses. Ethical processes will be followed and their information will be used only for the purpose of this study. The study will be submitted to the relevant research ethics committees at University of Salford and in Uganda. It is my hope that this study will develop a new academic advancement framework for Enrolled Nurses in Uganda and potentially accelerate their academic advancement.

With this letter, I therefore request your permission to access this information when the time comes.

Thank you for your assistance in this matter.

Yours sincerely



Joseph Mwizerwa.

Phd student, University of Salford

**Appendix
x 14:
Randomizer
Results:**

Range: From
1 to 24,296.
Arranged
least to greatest

1 Set of 423

Numbers per Set.

1.	120
2.	173
3.	205
4.	213
5.	224
6.	301
7.	327
8.	382
9.	428
10.	464
11.	474
12.	555
13.	605
14.	639
15.	727
16.	754
17.	851
18.	869
19.	878
20.	942
21.	1011
22.	1064
23.	1167

24.	1218
25.	1313
26.	1438
27.	1517
28.	1527
29.	1571
30.	1647
31.	1751
32.	1757
33.	1782
34.	1851
35.	1897
36.	2003
37.	2005
38.	2117
39.	2216
40.	2276
41.	2346
42.	2363
43.	2455
44.	2547
45.	2590
46.	2632

47.	2653
48.	2703
49.	2713
50.	2718
51.	2760
52.	2809
53.	2830
54.	2887
55.	2915
56.	2980
57.	3051
58.	3066
59.	3216
60.	3332
61.	3407
62.	3409
63.	3422
64.	3424
65.	3508
66.	3524
67.	3549
68.	3560
69.	3605

70.	3665
71.	3690
72.	3859
73.	3862
74.	3933
75.	3981
76.	4053
77.	4102
78.	4275
79.	4317
80.	4373
81.	4379
82.	4381
83.	4415
84.	4432
85.	4434
86.	4484
87.	4691
88.	4778
89.	4797
90.	4823
91.	4888
92.	4898

93.	4905
94.	4911
95.	4929
96.	5014
97.	5046
98.	5110
99.	5147
100.	5196
101.	5234
102.	5335
103.	5360
104.	5398
105.	5453
106.	5472
107.	5498
108.	5501
109.	5577
110.	5669
111.	5697
112.	5721
113.	5757
114.	5768
115.	5827
116.	6005
117.	6012
118.	6090
119.	6105
120.	6198
121.	6281
122.	6331

123.	6377
124.	6399
125.	6409
126.	6497
127.	6517
128.	6606
129.	6621
130.	6651
131.	6756
132.	6917
133.	6921
134.	7017
135.	7119
136.	7174
137.	7252
138.	7305
139.	7404
140.	7440
141.	7587
142.	7598
143.	7652
144.	7923
145.	7930
146.	7933
147.	7942
148.	8138
149.	8195
150.	8279
151.	8310
152.	8386

153.	8473
154.	8542
155.	8644
156.	8825
157.	8940
158.	8942
159.	9075
160.	9126
161.	9206
162.	9260
163.	9312
164.	9348
165.	9391
166.	9456
167.	9465
168.	9481
169.	9572
170.	9578
171.	9592
172.	9683
173.	9793
174.	9825
175.	9889
176.	10016
177.	10030
178.	10055
179.	10305
180.	10306
181.	10389
182.	10461

183.	10464
184.	10470
185.	10513
186.	10525
187.	10749
188.	10786
189.	10849
190.	10949
191.	10953
192.	11033
193.	11053
194.	11088
195.	11315
196.	11337
197.	11346
198.	11403
199.	11434
200.	11499
201.	11572
202.	11597
203.	11598
204.	11627
205.	11685
206.	11730
207.	11737
208.	11782
209.	11820
210.	11849
211.	11917
212.	11980

213.	12003
214.	12013
215.	12052
216.	12201
217.	12294
218.	12332
219.	12385
220.	12417
221.	12437
222.	12528
223.	12590
224.	12601
225.	12639
226.	12707
227.	12709
228.	12770
229.	12866
230.	12883
231.	12891
232.	13015
233.	13016
234.	13030
235.	13197
236.	13252
237.	13388
238.	13400
239.	13450
240.	13471
241.	13484
242.	13512

243.	13520
244.	13642
245.	13786
246.	13815
247.	13836
248.	14006
249.	14035
250.	14055
251.	14057
252.	14141
253.	14180
254.	14334
255.	14358
256.	14478
257.	14499
258.	14518
259.	14526
260.	14551
261.	14574
262.	14767
263.	14778
264.	14819
265.	14915
266.	14958
267.	14963
268.	14978
269.	15046
270.	15100
271.	15103
272.	15108

273.	15131
274.	15143
275.	15151
276.	15339
277.	15391
278.	15410
279.	15422
280.	15464
281.	15470
282.	15486
283.	15513
284.	15519
285.	15562
286.	15667
287.	15828
288.	15871
289.	15942
290.	16091
291.	16191
292.	16215
293.	16286
294.	16329
295.	16334
296.	16377
297.	16432
298.	16539
299.	16558
300.	16618
301.	16711
302.	16717

303.	16723
304.	16760
305.	16818
306.	16880
307.	16901
308.	16948
309.	16949
310.	16955
311.	16959
312.	17009
313.	17128
314.	17179
315.	17278
316.	17395
317.	17403
318.	17437
319.	17453
320.	17519
321.	17557
322.	17569
323.	17594
324.	17900
325.	17956
326.	17981
327.	18034
328.	18147
329.	18169
330.	18202
331.	18209
332.	18257

333.	18271
334.	18294
335.	18311
336.	18325
337.	18348
338.	18368
339.	18376
340.	18414
341.	18442
342.	18498
343.	18576
344.	18583
345.	18644
346.	18647
347.	18684
348.	18720
349.	18824
350.	18883
351.	18996
352.	19106
353.	19161
354.	19175
355.	19231
356.	19399
357.	19462
358.	19593
359.	19630
360.	19712
361.	19763
362.	19900

363.	19963
364.	20039
365.	20166
366.	20376
367.	20542
368.	20652
369.	20674
370.	20897
371.	20985
372.	21104
373.	21224
374.	21574
375.	21600
376.	21632
377.	21681
378.	21710
379.	21713
380.	21766
381.	21948
382.	21976
383.	21988
384.	21993
385.	22007
386.	22160
387.	22173
388.	22203
389.	22261
390.	22345
391.	22426
392.	22535

393.	22566
394.	22656
395.	22661
396.	22724
397.	22757
398.	22841
399.	22960
400.	23018
401.	23020
402.	23106
403.	23132
404.	23145
405.	23193
406.	23245
407.	23403
408.	23459
409.	23612
410.	23699
411.	23775
412.	23828
413.	23834
414.	23939
415.	23968
416.	24038
417.	24043
418.	24052
419.	24103
420.	24174
421.	24219
422.	24249

423.	24264
------	-------

Appendix 15: Participant information Sheet Survey.

March 3rd, 2019, version 3

Study Title: Strengthening educational advancement for Enrolled Nurses: Developing a new program framework for ENs in Uganda. The objective of this part of the study is to identify the barriers and facilitators for educational advancement of ENs within Uganda.

Invitation

I'm a Ugandan nurse PhD student at the University of Salford in the United Kingdom. I am interested in studying how to improve educational career advancement of enrolled nurses.

You are invited to participate in this study by filling a survey questionnaire. You have been selected randomly. The study will involve 450 enrolled nurses.

Your contribution through the survey will be useful in identifying the barriers and facilitators for educational advancement of ENs within Uganda. This will partly inform development of a new educational advancement framework to support ENs.

Aim of the Study

The objective of this study is to identify the barriers and facilitators for educational advancement of ENs within Uganda.

Do I have to take part?

Taking part in this study is completely voluntary. If you choose to be in the study, you can withdraw at any time without consequences of any kind and you can also choose to skip any question without undue consequence.

What will happen to me if I take part in the research?

If you agree to participate in the study, you will be required to fill a survey questionnaire at your convenience. The researcher anticipates that filling the questionnaire may take about 30 minutes to complete.

The questionnaire will be delivered to you in a mode that you will choose either on hardcopy or soft copy.

Expenses and Payments?

There will be no cost incurred to you because the research team will deliver the research questionnaire to you.

What are the possible disadvantages and risks of taking part?

There are no anticipated risks to you if you participate in this study.

What are the possible benefits of taking part?

Information you give may help in improving how education programs for working enrolled nurses may be designed in the future to improve access.

What if there is a problem?

If you have a concern about any aspect of this study, you should contact the researcher (Joseph Mwizerwa, contact number 0772749494) or email joseph.mwizerwa@aku.edu who will do their best to answer your questions. If you remain unhappy and wish to complain formally you can do this by contacting the Research Supervisor (Paula Ormandy) on contact 0161 295-0453 or Email: p.ormandy@salford.ac.uk number). If the matter is still not resolved, please forward your concerns to Professor Susan McAndrew, Chair of the Health Research Ethical Approval Panel, Room MS1.91, Mary Seacole Building, Frederick Road Campus, University of Salford, Salford, M6 6PU. Tel: 0161 295 2778. E: s.mcandrew@salford.ac.uk

Will my taking part in the study be kept confidential?

The information provided will be held secure in the best way practically possible. All records will be kept under lock and key. Computer records will be password protected. Data will be stored for a minimum of 3 years. The research team will be the only one having access to these records. No findings in this study will be linked to individual respondents. As well, you are not required to indicate your name on the questionnaire.

What will happen if I do not carry on with the study?

You can decide to stop participating at any time. At your indication and up to one month after submitting your survey, you can withdraw from the study. When you withdraw, information already obtained from you will be destroyed.

What will happen to the results of the research study?

The results of the research study will form part of my thesis. When possible, the results will also be published. Where possible they will also be presented in as many Ugandan nursing forums as possible. The outcome of the study will serve as a guide for nurse educators, regulators, and the policy makers, all intended to support EN educational advancement. It may also form a basis for future research.

Who is organising or sponsoring the research?

Currently there is no sponsor for the research. However, my employer, Aga Khan University, school of nursing and midwifery in Kampala, Uganda, covers the tuition of my course.

Further information and contact details

Principal Investigator: Joseph Mwizerwa

Telephone number: 0772749494

Address: P.O. Box 8842 Kampala Uganda.

Email address: joseph.mwizerwa@aku.edu

Appendix 16: Consent Form for Survey.

March 3rd, 2019, version 3

Please tick the appropriate boxes	Yes	No
Taking Part		
I have read and understood the project information sheet dated March 3 rd , 2019, version 3	<input type="checkbox"/>	<input type="checkbox"/>
I have been given the opportunity to ask questions about the project.	<input type="checkbox"/>	<input type="checkbox"/>
I agree to take part in the project. Taking part in the project will include completing a survey.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that my taking part is voluntary; I can withdraw from the study at any time and I do not have to give any reasons for why I no longer want to take part.	<input type="checkbox"/>	<input type="checkbox"/>
Use of the information I provide for this project only		
I understand my personal details such as phone number and address will not be revealed to people outside the project.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that my words may be quoted in publications, reports, web pages, and other research outputs.	<input type="checkbox"/>	<input type="checkbox"/>
Please choose one of the following two options:		
I would like my real name used in the above	<input type="checkbox"/>	
I would not like my real name to be used in the above.	<input type="checkbox"/>	
Use of the information I provide beyond this project		
I agree for the data I provide to be archived at the UK Data Archive. ²	<input type="checkbox"/>	<input type="checkbox"/>
I understand that other authenticated researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that other authenticated researchers may use my words in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form.	<input type="checkbox"/>	<input type="checkbox"/>

I understand that the data that will be kept by UK Data Archive will be anonymised data.	<input type="checkbox"/>	<input type="checkbox"/>
So we can use the information you provide legally		
I agree to assign the copyright I hold in any materials related to this project to [Joseph Mwizerwa].	<input type="checkbox"/>	<input type="checkbox"/>

Name of participant [printed] Signature Date

Researcher [printed] Signature Date

Project contact details for further information: Names, phone, email addresses, etc.

Joseph Mwizerwa. PhD Student University of Salford, School of Health & Society. Mobile tel: 0772749494, Email: joseph.mwizerwa@aku.edu

Appendix 17: Ethics Amendment Approval



Amendment Notification Form		
Title of Project: Strengthening academic advancement for enrolled nurses: Developing a new program framework for enrolled nurses in Uganda.		
Name of Lead Applicant: <i>Joseph Mwizerwa</i>	School: Health & Society	
Are you the original Principal Investigator (PI) for this study?		Yes
<i>If you have selected 'NO', please explain why you are applying for the amendment:</i>		
Date original approval obtained:	Reference No:	Externally funded project?
05/03/2019	HSR1819-051	Yes
Please outline the proposed changes to the project. NB. If the changes require any amendments to the PIS, Consent Form(s) or recruitment material, then please submit these with this form highlighting where the changes have been made:		
<p>Two changes are being proposed. The first one is to change from face to face key informant interviews to telephone interviews. The second proposed change is moving away from the physical conference hall consensus workshop with multiple participants to an online one. These changes are being made in light of the COVID19 risks associated with physical meetings, especially now that the COVID19 community spread is at its highest in Uganda.</p>		
Please say whether the proposed changes present any new ethical issues or changes to ethical issues that were identified in the original ethics review, and provide details of how these will be addressed:		
<p>The proposed changes do not present any new foreseeable ethical issues. The telephone interviews will be done via the participants' telephone numbers which they use regularly for their communication, while the online consensus workshop will be done on a licensed zoom application with enabled passcode that heightens the security of the participants and can go on for the desired duration of the workshop.</p> <p>I am aware of the exceptional nature of the request to use the zoom application, but it is the platform of choice in Uganda, used both safely and widely as an online conferencing platform in education and across other sectors. The bandwidth enables clear and better reception for uninterrupted meetings unlike Skype which tends to break up and stop every few minutes. Many people in Uganda refuse to use Skype because of the unreliable network.</p>		
Amendment Approved:	<input type="checkbox"/> YES	Date of Approval:
		11/01/2021

Chair's Signature:



Once completed you should submit this form and any additional documentation to the relevant Ethics Panel that reviewed the original proposal:

School of Health & Society	Health-ResearchEthics@Salford.ac.uk
School of Health Sciences	
School of Built Environment	
School of Environment & Life Sciences	S&T-ResearchEthics@salford.ac.uk
School of Computing Science and Engineering	
Salford Business School	SBS-ResearchEthics@salford.ac.uk
School of Arts & Media	A&M-ResearchEthics@salford.ac.uk

Appendix 18: Participant information Sheet, Interview.

March 3rd, 2019, version 3

Study Title: Strengthening educational advancement for Enrolled Nurses: Developing a new program framework for ENs in Uganda. The objective of this phase of the study is to examine the suitability of Ugandan EN advancement programs in meeting EN education needs.

Invitation

I'm a Ugandan nurse PhD student at the University of Salford in the United Kingdom. I am interested in studying how to improve educational advancement of enrolled nurses.

You are invited to participate in this study by participating in an interview. You have been selected purposively. The researcher anticipates that you will be one of 10 principals expected to participate in this study. The interview is expected to last between 45-60 minutes. Your contribution through the interview will be useful in examining the suitability of Ugandan EN advancement programs in meeting EN education needs.

Aim of the Study

The objective of this study is to examine the suitability of Ugandan EN advancement programs in meeting EN education needs.

Do I have to take part?

Taking part in this study is completely voluntary. If you choose to be in the study, you can withdraw at any time without consequences of any kind and you can also choose not to answer any question directed to you during the interview without undue consequence.

What will happen to me if I take part in the research?

If you agree to participate in the study, you will be required to participate in an interview that will be scheduled at your convenient time and place, most likely your school office. The duration of the interview is expected to be between 45-60 minutes and will be audio-recorded.

Expenses and Payments?

The research team anticipates that there will be no cost incurred to you in relation to the research.

What are the possible disadvantages and risks of taking part?

There are no anticipated risks to you if you participate in this study.

What are the possible benefits of taking part?

Information you give may help in improving how education programs for working enrolled nurses may be designed in the future to improve access.

What if there is a problem?

If you have a concern about any aspect of this study, you should contact the researcher (Joseph Mwizerwa, contact number 0772749494) or email joseph.mwizerwa@aku.edu who will do their best to answer your questions. If you remain unhappy and wish to complain formally you can do this by contacting the Research Supervisor (Paula Ormandy) on contact 0161 295-0453 or Email: p.ormandy@salford.ac.uk number). If the matter is still not resolved, please forward your concerns to Professor Susan McAndrew, Chair of the Health Research Ethical Approval Panel, Room MS1.91, Mary Seacole Building, Frederick Road Campus, University of Salford, Salford, M6 6PU. Tel: 0161 295 2778. E: s.mcandrew@salford.ac.uk

Will my taking part in the study be kept confidential?

The information you provide will be held secure in the best way practically possible. All records will be kept under lock and key. Computer records will be password protected. Data will be stored for a minimum of 3 years. The analysis and discussion of transcripts will use quotes from the FGD transcripts but will not use your names or any personal identifying information. The research team will be the only one having access to these records. No findings in this study will be linked to individual respondents.

What will happen if I do not carry on with the study?

You can decide to stop participating at any time. However, your contribution up to the point of withdrawal will remain part of the study.

What will happen to the results of the research study?

The results of the research study will form part of my thesis. When possible, the results will also be published. Where possible they will also be presented in as many Ugandan nursing forums as possible.

The outcome of the study will serve as a guide for nurse educators, regulators and the policy makers, all intended to support EN educational advancement. It may also form a basis for future research.

Who is organising or sponsoring the research?

Currently there is no sponsor for the research. However, my employer, Aga Khan University, school of nursing and midwifery in Kampala, Uganda, covers the tuition of my course.

Further information and contact details

Principal Investigator: Joseph Mwizerwa

Telephone number: 0772749494

Address: P.O. Box 8842 Kampala Uganda.

Email address: joseph.mwizerwa@aku.edu

Appendix 19: Ethics Approval from a Local Uganda REC



Plot 724/725 Mawanda Road, Kamwokya - Kampala
P.O. Box 21175 Kampala - UGANDA
Tel: (256)414 532 930
Email: theta@thetaug.org
website:www.thetaug.org

18th April 2019

Joseph Mwizerwa,
Principal Investigator,
School of Nursing and Midwifery,
Aga Khan University.

RE: Decision of THETA REC on the Protocol “strengthening academic advancement for enrolled nurses; Developing a new program framework for enrolled nurses in Uganda” Protocol Version 2, T-REC 001/19.

In the matter concerning the decision of THETA REC on your research proposal noted above, approval is hereby granted. The approval granted includes all materials you submitted for THETA REC review unless otherwise stated and is valid until **18th April 2020**.

As Principal Investigator of the research, you are responsible for fulfilling the following requirements of approval:

1. All co-investigators must be kept informed of the status of the research.
2. The study site/s may at any time be visited by the THETA REC for monitoring.
3. Changes, amendments, and addenda to the protocol or the consent form must be submitted to the REC for re-review and approval **prior** to the activation of the changes. The REC application number assigned to the research should be cited in any correspondence.
4. Reports of unanticipated problems involving risks to participants or other must be submitted to the REC. New information that becomes available which could change the risk: benefit ratio must be submitted promptly for REC review.
5. Only approved consent forms are to be used in the enrollment of participants. All consent forms signed by subjects and/or witnesses should be retained on file. The REC may conduct audits of all study records, and consent documentation may be part of such audits.
6. Regulations require review of an approved study not less than once per 12-month period. **Therefore, a continuing review application must be submitted to the REC eight weeks prior to the above expiration date of 18th April 2020 in order to**

continue the study beyond the approved period. Failure to submit a continuing review application in a timely fashion may result in suspension or termination of the study, at which point new participants may not be enrolled and currently enrolled participants must be taken off the study.

7. You are required to register the research protocol with the Uganda National Council for Science and Technology (UNCST) for final clearance to undertake the study in Uganda.
8. You are required to formally notify THETA REC on commencement of this study.

The following is the list of the documents approved in this application by THETA REC;

	Document	Language	Version
1	Full Research Protocol	English	2
2	Participant Consent Form	English	2
3	Data Collection tool Appendix 1, Appendix 2 Appendix 3	English	2

Kindly submit your written acceptance of this approval and I also take this opportunity to wish you well in your research.

Yours Sincerely,



Dr Francis Omujal,

Chairman, THETA REC

Appendix 20: National Research Clearance Uganda.



Uganda National Council for Science and Technology

(Established by Act of Parliament of the Republic of Uganda)

Our Ref: HS375ES

28th May 2019

Mr. Joseph Mwizerwa
Principal Investigator
Aga Khan University
Kampala

Dear Mr. Mwizerwa,

I am pleased to inform you that on **28/05/2019**, the Uganda National Council for Science and Technology (UNCST) approved your study titled, **Strengthening Academic Advancement for Enrolled Nurses: Developing a New Program Framework for Enrolled Nurses in Uganda**. The Approval is valid for the period of **28/05/2019** to **28/05/2022**.

Your study reference number is **HS375ES**. Please, cite this number in all your future correspondences with UNCST in respect of the above study.

Please, note that as Principal Investigator, you are responsible for:

1. Keeping all co-investigators informed about the status of the study.
2. Submitting any changes, amendments, and addenda to the study protocol or the consent form, where applicable, to the designated local Research Ethics Committee (REC) or Lead Agency, where applicable, for re-review and approval prior to the activation of the changes.
3. Notifying UNCST about the REC or lead agency approved changes, where applicable, within five working days.
4. For clinical trials, reporting all serious adverse events promptly to the designated local REC for review with copies to the National Drug Authority.
5. Promptly reporting any unanticipated problems involving risks to study subjects/participants to the UNCST.
6. Providing any new information which could change the risk/benefit ratio of the study to the UNCST for review.
7. Submitting annual progress reports electronically to UNCST. Failure to do so may result in termination of the research project.

Please, note that this approval includes all study related tools submitted as part of the application.

Yours sincerely,

Isaac Makhuwa
For: Executive Secretary
UGANDA NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

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Appendix 21: Details of the of the silo results

The results of all the three phases are summarised in the table below.

Objective one	Objective two		Objective three
Experience of ENs	Advancement Barriers	Advancement Facilitators	Suitability of current program
Institutional issues	Institutional Barriers	Institutional Facilitators	Institutional issues pointing to suitability concerns
Flexible scheduling of advancement education Few upgrading schools High cost of tuition Unfavourable policies and procedures	High cost of tuition fees Lack of flexible program convenient for working nurses Lack of flexible RN programs within participants locality Difficulty in dealing with admission processes and requirements Cumbersome two-year waiting time requirement	Admission Facilitators All year-round application and admission opportunity Support dealing with admission processes and requirements Removal of the two-year waiting requirement for eligibility to advance Program design Facilitators Availability of flexible RN programs within physical access Preferred flexible study program arrangements and designs for Enrolled Nurses in Uganda Choice of RN education design with or without study leave Weekends Full-time with chronic night duty shifts Few days per week Block system Choice of RN education design with study leave	Tuition challenges Institutional challenges pointing to lack of suitability Commencement of EN-RN program Motivation for starting EN-RN program (Better patient care, Demand for career advancement Improving programme access, Production of healthcare leaders) Niche of program Struggle with school regulations Challenges with structure of program (lack of suitability with Fulltime program, Challenging experiences, Residential status, Student coping mechanisms)

		<p>Fulltime Monday to Friday, no boarding on weekends Fulltime Monday to Friday, but no boarding Fulltime Monday to Friday and boarding Choice of RN education design without study leave Weekends Full-time with chronic night duty shifts Few days per week Block system Preferred education design innovation Work-based program in partnership with the training institution EN-RN-BSN nonstop</p> <p>Readiness for online learning by Enrolled Nurses in Uganda Having basic skills to use a computer Having basic skills to finding way around the internet Comfortable and knowledgeable on how use online tools Having access to a computer with adequate application software Having access to internet connection for computer at home</p> <p>General Facilitators Instalment payment system for tuition fees Accommodation as and when needed Baby or childcare facilities at the nursing school Short program duration (e.g., one year) Full-time access to internet</p>	<p>Enrolments less than capacity (Current Enrolment below capacity, Intervention adjusted enrolments, Low Starting enrolment numbers) Small number of schools offering the EN-RN advancement program Teaching and learning style</p> <p>Solutions and suitability sought Education design solutions Weekend, Few days per week, Block system, e-learning Partnership with employers Sensitivity of EN needs Counselling and encouragement Ease of exit and re-entry or dead year Flexibility in residential status Scheduling Convenience</p> <p>Tuition solutions Breaking tuition costs into component parts, Study and pay later, Instalments and flexible payment</p>
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		Being treated as a mature individual	
Personal issues	Personal Barriers	Personal Facilitators	Personal issues
Timing of advancement (age and season) Aspirations for advancement Failed attempt to advancement Need for career guidance Limited personal finances Low Salary unable to support self for advancement Saving difficulties Requirement for Tuition support	Insufficient income and personal finances Inability to access scholarships Concern about going into debts Lack of time Lack of technological and computer skills Personal health concerns Concern about attending school with young students Lack of confidence in own ability	Access to student loans for tuition fees	Admission challenges (Additional letters, Admission to schools far from home, Commitment fee, Fear of termination from work, and two years of relevant clinical experience requirement) Attitudinal or perceptual barriers (Age, In a hurry to finish, No change in practice, No interest in advancement, No new learning, Refuse to learn with ENs, Special treatment, Unpleasant past education experiences) Challenges related to attendance of learning (Absenteeism, Late coming, Low concentration, Leaving early, Dropout, Failure to start) Failure to cope Struggle with school regulations Tuition challenges
Family concerns	Family Barriers	Family Facilitators	Family concerns
Childcare and support Spouse concerns Extended family dependency	Concern about supporting family relatives Focus on taking care of biological children Role as a primary healthcare giver for family members	Financial or material support from spouse or other family members Encouragement from spouse or other significant family members	Childcare Spouse

	Having a discouraging or unsupportive spouse		
Work concerns	Workplace Barriers	Workplace Facilitators	Work concerns
Work design needs Employer/supervisor support Study leave experience mistreatment within the working environment	Lack of paid study leave from job Lack of flexible work schedule at workplace Understaffing at workplace Unsupportive workplace supervisor or employer for career advancement Ban on career advancement imposed by district or employer	Study leave with pay offer Permission from employer to work flexible duties Permission from employer to enrol into study program Encouragement from supervisor or employer Tuition fees contribution from employer Other financial or material support from employer (Transport facilitation to school (put transport under this).	Fear of termination from work Failure to access leave Workplace challenges (Promotion, Risk taking by Non-disclosure at workplace, Engaging a stand-in person, Working Chronic night shifts)

Appendix 22: Details of the of the integrated results

Themes and chapter outline	
Chapter 5: EN experiences and aspirations	Chapter 6: Educational and workplace institution issues
<p>Worries of unaffordability and unavailability</p> <ol style="list-style-type: none"> 1. Insufficient personal finances <ol style="list-style-type: none"> a. Low Salary b. Saving difficulties. 2. Held and limited by employment <ol style="list-style-type: none"> a. Workplaces unsupportive of advancement b. Mistreatment within the working environment c. Chronic night shifts and Risky arrangements 3. Unmet advancement aspirations <ol style="list-style-type: none"> a. Aspirations b. Failed attempts to advancement 	<p>Tuition fee concerns</p> <ol style="list-style-type: none"> 1. Access and cost <ol style="list-style-type: none"> a. High tuition cost b. Inability to access scholarships and student loans 2. Favourable payment systems. <ol style="list-style-type: none"> a. Instalment payment system b. Breaking tuition cost into component parts c. Study and pay later
<p>Struggling with family responsibilities</p> <ol style="list-style-type: none"> 1. Deprioritized by family responsibilities <ol style="list-style-type: none"> a. Child child-care and support. b. Spouse: protagonist or antagonist c. Stretched by extended family roles 2. Attitudinal or perceptual barriers 	<p>Student, work and program challenges</p> <ol style="list-style-type: none"> 1. Admission challenges <ol style="list-style-type: none"> a. Additional letters b. Admission to schools far from home 2. Challenges with program design <ol style="list-style-type: none"> a. Unsuitable fulltime schedule

<ul style="list-style-type: none"> a. Age and Seasonality of advancement b. In a hurry to finish c. Want special treatment 	<ul style="list-style-type: none"> b. Struggling with residential requirement c. Enrolments less than capacity d. Struggles of attendance e. Instructional approach f. Struggles of technological and computer skills.
<p>Locked out of advancement (unplanned for, not thought about)</p> <ul style="list-style-type: none"> 1. Inability to meet program schedules <ul style="list-style-type: none"> a. Lack of conveniently scheduled advancement education b. Lack of flexible RN programs within physical access c. Small number of schools offering the EN-RN advancement program 2. Unfavourable policies and procedures <ul style="list-style-type: none"> a. Difficulty in dealing with admission processes and requirements Cumbersome two-year waiting time requirement b. Challenges of relevant clinical experience required 	<p>Seeking suitability</p> <ul style="list-style-type: none"> 1. Admission enabling processes <ul style="list-style-type: none"> a. All year-round application and admission opportunity b. Support dealing with admission processes and requirements c. Ease of exit and re-entry d. Counselling and career guidance 2. Program flexibility <ul style="list-style-type: none"> a. Flexible scheduling b. Flexibility in residential status (Make residency requirement optional) c. General flexibilities 3. Workplace facilitators <ul style="list-style-type: none"> a. Advancement enabling employment Study leave with pay offer b. Permission to work flexible duties and advance

Appendix 23: All themes, categories and codes

EN the person: experiences and aspirations			Institutional: Educational and workplace issues		
Themes	Categories	Subcategories	Themes	Categories	Subcategories
Worries of unaffordability and unavailability	Insufficient personal finances	Low Salary Saving difficulties.	Tuition fee concerns	Access and cost	High tuition cost Inability to access scholarships and student loans
	Held and limited by employment	Workplaces unsupportive of advancement Mistreatment within the working environment Chronic night shifts and Risky arrangements		Favourable payment systems.	Instalment payment system Breaking tuition cost into component parts Study and pay later
	Unmet advancement aspirations	Strong advancement Aspirations Failed advancement attempts	Student and program challenges	Challenges of Program scheduling	Unsuitable fulltime schedule Enrolments less than capacity
Struggling with family responsibilities	Deprioritized by family responsibilities	Child child-care and support. Spouse: protagonist or antagonist Stretched by extended family roles	Seeking suitability	Admission enabling processes	All year-round application and admission opportunity Support dealing with admission processes and requirements Ease of exit and re-entry
	Attitudinal or perceptual barriers	Age and Seasonality of advancement In a hurry to finish Want special treatment		Program flexibility	Flexible scheduling Flexibility in residential arrangement General flexibilities
Locked out of advancement	Inability to meet program schedules	Lack of conveniently scheduled advancement education Lack of flexible RN programs within physical access Small number of schools offering the EN-RN advancement program	Workplace facilitators	Study leave with pay offer Permission to work flexible duties	
	Unfavourable policies and procedures	Difficulty in dealing with admission processes and requirements Challenges of relevant clinical experience required			

Appendix 24 Quote reference table

Quote #	Quote in detail
Q1	“...we enrolled nurses, we are paid the least ...very low salary.” (EN4, Central FGD)
Q2	“...on that still goes back to the institutions where we are working, you may not even get full salarySo you see the challenges that the nurses face.... so you may not be paid full salary and yet your salary is even below the margin, so how are we to meet school costs....” (EN3, Central FGD)
Q3	“The difference is too big and yet we do the same work,... that they're supervisors!” (EN6, Central FGD.)
Q4	“...these days we are seeing that the registered nurses, their salary is higher than us...It is almost doubling ours....” (EN5, Western FGD)
Q5	“The experience like as we told you at the beginning...our hearts cannot be satisfied because you feel when you go for registration, one thing, the salary is increased, it also helps you as you help your family.” (EN5, Western FGD)
Q6	“Out of the 35 students who finished last year, only about 20 had completed the tuition. Up to now, the other students are still owing the school a lot of money.” (Principal 1)
Q7	“... we enrolled nurses we are paid the least despite the work we do..... so to save becomes very difficult in our economy right now....” (EN4, Central FGD).
Q8	“Many problems, because I may be saving my money like now for me to go to school, and then you get a problem, your mum gets sick and you get your money and pay for the hospital fees..., and again the child is sick, from there then the sister is sick, you end up when again the other year you are not going [to school], then you say let me start saving afresh.” (EN8, Eastern FGD).
Q9	“Unfortunately, the category of those ones in the private sector...because in the private sector when you talk about going back to school, they terminate you. ... what they do [ENs] is that they plan early such that they begin saving...by the time they come to school, they have some money to cater for their tuition and other needs.” (Principal 2)
Q10	“I think our employers should be flexible, ...They should embrace the idea. ... they should also advise us, ... they should be supportive, they should support us to go back to school, not just talking ...” (EN3 Central FGD)

Q11	<i>“This is my sixth year of work ,... I tried to apply to get full time study leave with pay, I was supposed to be in school by 1st of next July (meaning July 2019), but I have failed to get it.” (EN1, Northern FGD).</i>
Q12	<i>“I have not had a good experience because within these six years of working experience, I have been undergoing a lot of challenges. There is too much work, no motivation..., you want to go to school but they don't allow you. Because we thought, if you have that long time of working experience, we have some sponsorship at the district, and we thought the district could allow some few staff to go for a study leave and the sponsorship. But we have not seen it.” (EN6 Northern FGD)</i>
Q13	<i>“...getting study leave is not easy, because you might be like three in a facility, you all want to go back for further studies, so they can't give the three of you, they have to give one person.” (EN4 Eastern FGD)</i>
Q14	<i>“... ah! Enrolled nurses are not allowed to do the real nursing care ..., we are given selected work, other things (being with patients) you don't do.” (EN7, Central FGD)</i>
Q15	<i>“...they no longer employ enrolled nurses at our hospital...And for us who are there, they try to put us like behind the scenes, be like at computer, they give you run around work...That is why we push on for school ...” (EN7, Western FGD)</i>
Q16	<i>“...because getting study leave is difficult, that is the internal arrangement we have been talking about ..., if I can go through [to get admission], I can make it [the internal arrangement] ... It is like this, I will be at school, from Monday to Thursday, and then am going to be out on Friday, Saturday, and Sunday. Yeah! Then I go back to school on Monday morning.” (EN5, Eastern FGD).</i>
Q17	<i>...by the time I wanted to go [to school] we were three in the unit [workplace] and one was already there [at school on internal arrangement], and the other one was also hoping to go in the other[following] year and for me I was waiting..., I was then transferred and taken to another health facility where I found people who were already there [school] so I could not go.” (EN3, Eastern FGD).</i>
Q18	<i>“If you are not cooperative with your fellow staffs to make internal arrangements, it will affect your planning to go to school.” (EN5, Eastern FGD).</i>
Q19	<i>It is like this, I will be at school, from Monday to Thursday, ... then am going to be out on Friday, Saturday, Sunday. Yeah! Then I go back on Monday morning... (EN10, Eastern FGD).</i>
Q20	<i>To supplement or give more light or information about study leave, ...what I realized, it is not easy to get it, that is why people just sacrifice their lives to go as a private thing, they</i>

	<i>work, at the same time they study. For example, me am in OPD causality, it is a very busy place, ... we are only five people working there, and they want the three shifts to be covered, ... So you find like if you ...want to study, they will not grant you study leave. my two colleagues who are studying, whom we are working with, they are doing their private arrangement, they are working nights or evenings as they balance their studies. So it is a bit challenging to access a study leave. (EN10, Western FGD).</i>
Q21	<i>"I have seen a good number do night duty; so they do like chronic night shifts." (Principal six).</i>
Q22	<i>"... what they normally do is to identify people to stand in for them and then they pay them so that they don't lose their jobs." (Principal eight)</i>
Q23	<i>"Ha...we don't get into it that much, but we get to know it like halfway through the training. Like for some of them, in terms of employment, their bosses have no idea they are studying while working [laughs]. A good number [of the employers] actually do not know that their ENs are studying, and that is one of the biggest challenges when it comes to this group – lack of disclosure at workplaces." (Principal 6)</i>
Q24	<i>"The experience like as we told you at the beginning, ... my heart cannot be satisfied because you feel when you go for registration,... the salary is increased, it also helps you as you help your family. Then again, even the uniform changes, you know sometimes you go in a meeting and you find that you are the only person with pink, even here in the hospital... So, it remains hurting in your heart that if I had upgraded I would even have changed my uniform and even the belt." (EN5, Western region, FGD)</i>
Q25	<i>"I would also want to upgrade, like I said earlier, I would also wish to upgrade to registration level, ...given an opportunity, I would go and upgrade,.... to registration level in nursing." (EN5, Western FGD).</i>
Q26	<i>"Ah..., I hope to upgrade to registration, diploma in nursing..... I hope to advance to a PhD in nursing." (EN2, Central FGD)</i>
Q27	<i>"I have been an enrolled nurse in a PNEP, I want to upgrade not just by word, I have tried several times, this is my third year of doing interviews, I have passed the interviews but now the problem is, financial problem.so, there is that feeling that I should upgrade one time. So am still in the process of trying." EN2, Northern FGD)</i>
Q28	<i>"..., am so willing but the challenge is with the money, you look here and there, and you feel stranded, you feel like you want to quit the profession and do other things because you find that staying an enrolled nurse is challenging ... Because these hospitals ... they are phasing us out indirectly." (EN6, Central FGD)</i>

Q29	<i>"I wanted to change the course ...I wanted to go for dental...I went to... university and even got an admission but things were hard." (EN8, Western FGD)</i>
Q30	<i>"... me I have never tried because of the environment or the life I was in. I couldn't attempt to even go and look for an admission because caring for four children is not easy and now the two are in secondary [school] and they pay a lot of money..., so I had just to put it aside and my dreams were just focused at my children... that maybe, where I did not reach, let them reach." (EN10, Western FGD)</i>
Q31	<i>"..., like I said earlier, I would also wish to upgrade to registration level, but all the money goes to my children. I thought if I go to study, my children will not get school fees, so my priority was that (of children). If I get salary, it is always used to pay for my children school fees. I have three of them, am the one who supports them." (EN5, Western FGD)</i>
Q32	<i>"... that has made a challenge to me, ... I would have gone to school sometime back, ... I would be the first to go, but the problem is that big family, you see when you have a family of your own, these are your children...and I am a single parent, you can't leave them out." (EN6, Northern FGD).</i>
Q33	<i>...the majority are already having babies or have children. ...then there are some few who come ... being overwhelmed with family demands. But majority have children. At least you see them come to ask for permissions like "my child is sick", "I have to go to my child's school", "I have to take my children back to school before I come back for the semester", and others like that." (Principal four)</i>
Q34	<i>Our policy is that if a student gets pregnant,... and reports or we identify it, we temporarily terminate her training, and she goes home, carries the pregnancy up to term, delivers, breastfeeds the baby for six months, and then comes back ... and apply afresh to continue. .." (Principal seven)</i>
Q35	<i>"...I may not be the only one deciding, the husband may also decide with me, okay I may say that I want to go this year and he may refuse, and it becomes very hard... it is really very hard for us especially women because at home the husband needs services, ...so it makes it hard for you...." (EN1, Northern FGD)</i>
Q36	<i>"... We require acceptance letters, as stipulated in the admission letter, that someone has been accepted [allowed] to go for training. Either the spouse writes or the parent writes, and they are aware that he/she [the student] is at school; so, we have that as a requirement item on the admission letter. Most of them have the letter of permission from a spouse. Like in that class of 30, I think it's like only five (5) or four (4) who are not married yet." (Principal five)</i>

Q37	<i>“...there are some ENs who come and say they have issues with their spouses..., that they [spouses] don’t want them to upgrade. So some of them have failed to start or they dropped out during the course of the study, or some of them have remained with a lot of fees [debts] for the school because of lack of support.” (Principal one)</i>
Q38	<i>“... For me I have five dependents, my biological brothers and sisters and also my parents. I also have two children, when I add on those five, they make it seven,... and this little brother of mine, I had to pay for him right from primary to secondary. Some of them are in tertiary institutions now. I am the second born...The first born did not go to school, I am the only person earning in the family. So I have a lot of difficulties running those family operations, making sure those people are in school...” (EN6, Northern FGD)</i>
Q39	<i>“My biggest problem is the Extended family...Dependents.” (EN9, Central FGD)</i>
Q40	<i>“..., I wanted within here, a nearby institution, because I have to get somethings for myself, I have to take care of my mum and I have also to pay my tuition ...” (EN5, Central FGD)</i>
Q41	<i>“It is in my heart and even I tried to do it (advance) for many years because I tried to go back but I failed. I’m renting, have children ...I have my young sisters that I support, yet I’m a double orphan. Am the elder sister, so I look after my parent’s family and my family..... I have two children and from my parent’s family they are four.” (EN10, Western FGD)</i>
Q42	<i>“Now you are attending to your books, then the children?!... ... Most especially school going children... You know, going to school is not so easy... and look at a time when you want to put in your application, you are breast feeding. That is why I put it earlier that, fresh from school, shorter time, and go back to school.” (EN4, Central FGD)</i>
Q43	<i>“...my experience is that before I got this job, I was trying to buy newspapers, looking for information on scholarships..., for nurses, they would only consider nurses below the age of forty-five years...” (EN10, Central FGD)</i>
Q44	<i>“Yes, even age. If someone is fifty and has been enrolled nurse ..., now I have made fifty, why stress myself that am going to advance...when I’m about to retire?” (EN10, Eastern FGD)</i>
Q45	<i>“... we really get very few old people. I remember last year we had one lady who was really old, at around 50 years old. But she failed to cope up with the examination, and we discontinued her from the program.” (Principal one)</i>
Q46	<i>“... others get challenges with educational [performance] – especially those who take quite long without coming back for upgrading...Yes, I have seen a number of them suggesting that they are too old to join the young ones back in school, ...But indeed when</i>

	<i>someone has outgrown [laughs], going back to school may be a challenge – first of all, competing with the younger ones and even the process of learning itself.” (Principal four)</i>
Q47	<i>“... we used to have some of those in their 40’s in class, but their concentration was a bit low plus even their style of writing and the English language itself ... I mean they had their own challenges, and so it may be difficult for them. Then also with the introduction of computer technology, there is much fear especially among those who are of advanced age. When you talk about computer, they get perturbed. So it might be that because of some of these factors, some of them [the older ENs] choose not to go back to school. And also, those who are approaching 60 years, they may perceive themselves approaching retirement and thus not benefiting much from the training. That may hold them back.” (Principal two)</i>
Q48	<i>“Among the pioneers was one lady who was about 48 years doing the diploma program and she was fitting very well in the class. And such students are normally rich in work experiences, so they normally help the young ones.” (Principal eight)</i>
Q49	<i>“So, we tend to be very strict on class attendance; and they feel we are very strict on them. For them they feel that when they sit the exams and pass them, that is enough. But for us we say it is not about passing exams, it’s about shaping the right knowledge, attitude and competencies; so, you are required to be in class to get that.” (Principal eight).</i>
Q50	<i>“Those ones are the ones I am saying they are like “give me the paper and I go”. ...with a thinking that “you are not adding anything to me; I just need the paper and I go”. Actually, the ones I have are on our cases to hurry up and give them their papers because promotion time has reached.” (Principal six)</i>
Q51	<i>“... some of them come when they have been the ones running the health centres and the like, so they come as bosses [laughs] – and that’s where there’s a big issue also. So, when they come as bosses they feel like their teachers are below them in terms of power and authority, and that hinders many of them because they feel like they deserve to be respected in a special way... I think they just want a certain kind of respect...they feel like, “I can come late and I should be allowed”; “I can be late on my assignment submission and that should be ok because you know I am...” [laughs] – that is the attitude. Then there is this thing of coming when they haven’t moved on from certificate level; they want to be spoon-fed – and that’s one of the biggest issues now.” (Principal six)</i>
Q52	<i>“And then you know with adult learners, their attendance of class, they want to come in at their own will or time. They tend to frontier their personal issues first. They will tell you I need to be at the job for head count, etc.” (Principal seven)</i>

Q53	<p><i>“For example, you might see that the tutor is qualified at a degree level; but you find such a tutor is teaching certificate students. And once in while he/she would like to join a diploma class with the certificate class if they have the same content, ... but they don’t feel like they can share a class. They don’t want to mix up.” (Principal seven)</i></p>
Q54	<p><i>“I see that it is a challenging experience because they have many other responsibilities on top of being students. ...because you find somebody has multiple issues like they have to care for the family, and they have also to make sure that they secure their jobs. So, meeting all those things is very difficult for them. Sometimes they reach in class and they sleep...” (Principal one)</i></p>
Q55	<p><i>“When we get these students, we interact with them; they tell us their problems and their challenges. But the students we get; their background usually is that they are working class, have families, some with even young families, have fulltime jobs. You find them with all these, i.e., they are working, they have families, and their jobs are fulltime; others have businesses, etc.” (Principal three)</i></p>
Q56	<p><i>“For me I know very well that, we nurses who work either in government or recognized institutions, we do work for only four days in a week. So, a week has seven days. These three days I think we can program for studies, then the other days we do work. There, we can do both working and studying...” (EN10, Central FGD).</i></p>
Q57	<p><i>“That is one example, I have friends, brothers in the central, ...others have even done evening programs, others have done weekend programs, and we have seen them move on, leaving us where we are ...”. (EN7, Northern FGD).</i></p>
Q58	<p><i>“I really agree that they [school programming] should at least consider those people who have engaged themselves in marriage, and they are carrying out marriage responsibilities ...caring for the children and their spouse, they need to upgrade truly but they have a lot of hindrances ...so they should have the option for non-residential.” (EN4, Western FGD)</i></p>
Q59	<p><i>“We have seen especially that sending students to far schools is a challenge.... Some time ago we had tried to balance the region of origin, but then you find some people are working in central region although they originate from another region like western. So, you find you have decided to select and admit the student to the western region, thinking that these ones should be suitable for this area; but when they reach, they come and request for transfer because the person is working in the central region and so he/she prefers studying in central region schools. ...Other reasons could be family. May be the person has a family... and it could be easier to manage when they study near their family.” (Principal four)</i></p>

Q60	<i>“...if an EN wants to join an extension program, you find they are looking at the balance between job and school, and maybe the training institutions are not near. So, it may hinder them from joining.” (Principal three)</i>
Q61	<i>“..... there is a big and great challenge for mothers who go back to upgrade, most especially those who come from very far and have children, I have seen many...whose children fall sick and they have to move away from books [school] and go and look after the children, it is a very, very big challenge.....programs should be near them...” (EN4, Central FGD)</i>
Q62	<i>“...for us here some of these are not easy, you find like for example ... the nearest school is Lira school of nursing in Lacor, for which you have to move about sixty or seventy kilometres away, and the program is not even favourable because its fulltime...” (EN7, Northern FGD)</i>
Q63	<i>“But also, there are not many diploma [EN-RN] programs around this region. So, around this area, this is the only school that offers a diploma program.” (Principal four)</i>
Q64	<i>“When we advertise, it is clear ... the person has to attach a recommendation letter from their employer. So if you don’t have those ones, of course, you are kicked out ... Even the interview panel cannot interview you because you do not meet the [selection] criteria.” (Principal two)</i>
Q65	<i>“...and we have found out that some forge their recommendation letters. There are pre-entry interviews, and it is a requirement that your boss gives you recommendation letter allowing you to go for further studies. So, they concoct recommendation letters such that when they come, they are able to study while working at the same time, but in hiding. So, it may challenge their educational performance as well as their workplace performance – because if you are not stable at work and you are equally not stable in class, it can affect the performance.” (Principal four)</i>
Q66	<i>“There is commitment fee of five hundred thousand shillings (UGX 500,000/=), but it is part of tuition. As you come to pick your admission letter, you pay that amount; it is part of tuition – you are explained to very well.” (Principal five)</i>
Q67	<i>“Yes, candidates are expected to make down payment of 80% of the total fees before admission is offered.” (Principal eight)</i>
Q68	<i>Some of the enrolled nurses are single parents so according to our economy now, paying your two point something (commitment fee) and again paying school fees for three people which is one point for every child, you find that it is a challenge. (EN8, Central FGD)</i>

Q69	<i>“For me the thing I find unrealistic is that two year waiting time... It should be made one year or less ...to allow one to go back to school before one loses morale...or because even parents pass on who would have helped.” (EN4, Central FGD)</i>
Q70	<i>“... when we talk about the minimum experience of 2 years, it doesn’t include for example someone who has been working in a drug shop or a pharmacy. One has to be attached to a functioning [clinical] health facility.” (Principal two)</i>
Q71	<i>“Yes, I also tried but the challenge was the same, school fees... I first went for that admission form to just have a look at it and see the amount, but when I looked at it, ...I gave up... What stopped me was ..., according to my salary, I can't manage that school fees.” (EN4, Western FGD)</i>
Q72	<i>“Tuition is expensive because you can get admission but fail to pay tuition.” (EN 10 Central FGD).</i>
Q73	<i>“Yeah, like I said [earlier]; most of these ENs earn very little money which cannot pay their tuition. You find them struggling.” (Principal three)</i>
Q74	<i>“... diploma nursing [EN-RN program]!!, ... there is no sponsor, I have not heard of it....and I have never heard of people who get scholarship to do registration.” (EN8, Western FGD)</i>
Q75	<i>“I’m not aware of any other people or organisations who could have supported me. Not really.” (EN4, Western FGD)</i>
Q76	<i>“I have also seen students apply to the students’ loan scheme, only that a few are given. You find that only 2 or 3 in a class are given. So, I don’t know which criteria they follow because you find that many apply but only a few are given.” (Principal three)</i>
Q77	<i>“Next five years, I think, given the opportunity, and I get tuition, I think I will have upgraded...By God's grace, I may get somebody to sponsor me.” (EN8, Western FGD)</i>
Q78	<i>“Those with financial challenges; for example, if he/she has not managed to pay school fees, we are designing a program where the student can be given tasks to do for the school. We subtract some money what they may have worked for, and it covers part of their school fees...” (Principal seven)</i>
Q79	<i>“The only support we can offer them as a school is allowing them to pay in bits. Those who are not able to complete their tuition at once, they pay in a phased manner. We sometimes even allow them to do exams when they have a balance [i.e., without completing tuition payments]. But we encourage them to pay this money.” (Principal four)</i>

Q80	<i>“You pay accommodation fee even when you do not want to stay there...because the program says, full time.” (EN6, Central FGD)</i>
Q81	<i>“Those ones who choose to stay outside the hostel pay less by four hundred fifty thousand shillings (UGX 450,000/=). Yeah, because accommodation is UGX 450,000/=.” (Principal seven)</i>
Q82	<i>“Those who do not stay near the school may have their supper at their places of residence...They eat lunch at school, so we charge them 50% of meal cost.” (Principal eight)</i>
Q83	<i>“Another unrealistic thing is..., when you fail to pay tuition, even by one hundred thousand [a small amount], they will not allow you even to sit for exams. Unless you finish it. At least they would allow you to sit the exams, they retain your results, and then you can pay after you have finished.” (EN9, Central FGD)</i>
Q84	<i>“We have even allowed some to sit for their final exams [with tuition balances]. But we know that when they come for their results, they cannot receive them until they have cleared. So some are allowed to sit for their final exams, then go and work and complete the tuition thereafter – as long as they pay the fees for UNMEB.” (Principal four)</i>
Q85	<i>“The program is fulltime Monday to Friday...I think one of the things is that the EN-RN extension cannot be a [typical] fulltime program [laughs]. I think our governing bodies should receive that; unless they don’t want people to work. ... they need to look into the issues of it being fulltime.” (Principals six)</i>
Q86	<i>“What we have seen is that people want to advance their career. However, there is a challenge that one may not be able to leave their place of work to come back for studies. ..., so, the fulltime program becomes a challenge.” (Principal four)</i>
Q87	<i>“The fulltime program is hectic, very demanding. The students try to balance between school, work, and their families; ... really hectic and demanding. You find others may be dropping out, and others delaying to complete the course.” (Principal three).</i>
Q88	<i>“...most of them have their colleagues who work for them [covering them at work]. I have seen a good number do night duty; so they do like chronic night shifts. Then there are some others who do duty exchanges; yeah, I think that’s what I have seen commonly...” (Principal six)</i>
Q89	<i>“Oh!!... We registered it as a fulltime program; and we are indeed carrying out a fulltime program. And that explains why I have few students. ...because I get many who come for the interviews; but when I am deliberating with them, they prefer a part-time program or</i>

	<i>weekend program which I don't offer. So, some of them don't turn up because they know it's a fulltime program.” (Principal 7)</i>
Q90	<i>“Our admission capacity is 40..., but the biggest number we have had is 16 students enrolling for the program.” (Principal eight)</i>
Q91	<i>“We get 50 and below. Sometimes we get 40; sometimes we get 30 or 35; even like 25 in a class. ...the number keeps fluctuating. Our capacity can go up to 200... But we have never reached even half of our admission capacity. We would expect students to come and enrol...but whatever happens out there... May be others go elsewhere.” (Principal three)</i>
Q92	<i>“But at the beginning, ... the first years, the numbers were very small. But as we talk they are somehow increasing; we now have 30 students in the registered nursing [current intake]. But we started with eight (8), then four (4), then five (5); like that until now we have risen to 30.” (Principal five)</i>
Q93	<i>“One of the school regulations that students struggle to cope with, is that, as we said, the program is strictly residential. Once they have reported, they are not supposed to move out of the hostel. So you find them sneaking out and going back to their homes. So that one is often breached. But what the problem might be for the marrieds because being in a residential program; they may not have time to fulfil their marital obligations. Actually, we have heard a good number of them complain that when they come to school; their marriages become unstable. And I think that's why some of them sneak out.” (Principal two)</i>
Q94	<i>“Absenteeism in class [talks while laughing] haaa..., some of them are regular dodgers... Others come and attend classes and go halfway, and in the middle of the lesson they have to disappear. This is because they want to make it on the attendance list for the 75% attendance requirement but when they actually need to go back and attend to their jobs.” (Principal three)</i>
Q95	<i>“...meanwhile they also struggle to attend the program. It is usually a challenge. ... However, it affects their performance. As for us in the school, it affects their performance. I don't know if it also affects their performance at their workplaces; but for us we realise it affects their performance at school.” (Principal nine)</i>
Q96	<i>“Ok, some of the reasons they have given commonly are either themselves are sick or their children are sick, or a relative has passed on, and sometimes when they are government employees, they say that either they want them at the place of work for head counting or they are going to the districts, etc. So, they have given such stories when they are absent from the school.” (Principal one)</i>
Q97	<i>“...they are supposed to be in class from 8am... But because of the challenges at the workplaces some find this as a rule that is very disturbing ... those who work night shifts</i>

	<i>find it difficult because some people relieve them at the very time they are supposed to be in class; and for us we expect them at 8am. So reporting for class on time is a challenge.”</i> (Principal eight)
Q98	<i>“...they struggle with punctuality within the school.”</i> (Principal one)
Q99	<i>“... what I can say is that those who may not have such obligations concentrate very well in the fulltime program, whereas those who have them can have their attention diverted into those additional responsibilities.”</i> (Principal four)
Q100	<i>“Others come and attend classes and go halfway, and in the middle of the lesson they have to disappear. This is because they want to make it on the attendance list for the 75% attendance requirement but when they actually need to go back and attend to their jobs.”</i> (Principal three)
Q101	<i>“Also, our employers and also some other people should not be self-centred, because there might be some people who don't know, but because those employers get to know about those opportunities, so if they could let us know, then it would be good”.</i> (EN5, Central FGD)
Q102	<i>I think we need mentors; we need role models; we need people who motivate those at that EN level to know that it is possible. And then the schools can put programs that make a difference, so as to make the people at that level also feel like “I need that kind of training.”</i> (Principal four)
Q103	<i>“Then we keep giving them guidance and counselling.”</i> (Principal two)
Q104	<i>“Of course, when a student asks for a dead semester or dead year, normally we allow them; and they are not charged any fines.”</i> (Principal three)
Q105	<i>“Me I want a program, say three days in a week, to study then four days at work.”</i> (EN9, Eastern FGD)
Q106	<i>“For me I know very well that, we nurses who work either in government or recognized institutions, we do work for only four days in a week. So a week has seven days. These three days I think we can program for studies, then the other days we do work. There, we can do both working and studying...”</i> (EN10, Central FGD)
Q107	<i>“I would need full time, because ... there is no stress of work again, ... and there is enough time for you to concentrate while at school.”</i> (EN7, Eastern FGD).
Q108	<i>“I want it [program] to be structured at least Monday to Friday and then on Friday or Saturday I go back to my family.....school that allows me over the weekend to come out and be with my family.”</i> (EN6, Eastern FGD)

Q109	<i>"... there is wanting full time but when the school is not so strict, ... even most schools during Saturday and Sunday they don't teach, so me I might be there full time but during weekend I also go and do some programs [personal engagements]." (EN3, Eastern FGD)</i>
Q110	<i>"Even the full-time program should allow some degree of flexibility for the mature family students...So we want schools that don't interfere with our weekend!" (EN9, Eastern FGD)</i>
Q111	<i>"Because like issues of public holidays at least all students with families should be given a break ...to go home and share it with their families." (EN7, Central FGD)</i>
Q112	<i>"Some of them want a weekend program; and actually they have asked for it many times. And because it's not available, they cannot come. I think that is one of the most common [issues] that we have found." (Principal six)</i>
Q113	<i>"Alternatively, we could also change it to a weekend program. We could start slowly as we monitor its success and maybe it can pick up later." (Principal 3.)</i>
Q114	<i>"Yeah, I think if we developed a blended learning program; where students would come around for, may be, only a few days per week and then go back to where they live or where they work as they access the education from there." (Principal three)</i>
Q115	<i>"They can work on it in that direction, and may be they can make the program last for 2 years. And this would cater for adjustments in study days per week (such as a few days in a week), so that they give opportunity for people to stay at work." (Principal six)</i>
Q116	<i>"You know when a program is fulltime, there is some rigorous work done... may be the program could be given some days in a week or some weeks in a month; people can come for maybe modules (i.e., when it becomes a modular program), etc." (Principal nine)</i>
Q117	<i>"I don't know whether the nurses can also try [the same approach]. However, the e-learning also has its own problems." (Principal two)</i>
Q118	<i>"Yes, there are those that do not turn up. The first reason is us offering a fulltime program, yet they prefer two (2) days in a week or a weekend program; others even prefer e-learning program." (Principal seven)</i>
Q119	<i>"But because of the challenges at the workplaces ...the other rule that normally affects them is that they are expected from 8am, that is time of arrival in class. But those who work night shifts find it difficult because some people relieve them at the very time they are supposed to be in class..." (Principal eight)</i>
Q120	<i>"Some of them who do not get study leave, have come to the office and talked about it. So that is why I said that sometimes on Friday the class is not attended. So they start on</i>

	<i>Fridays through the weekend to compensate for off-duty days at their respective workplaces.” (Principal one)</i>
Q121	<i>“...the program is residential. We have the school hostel, no choice for staying outside...the problem might be for the marrieds because being in a residential program; they may not have time to fulfil their marital obligations.” (Principal two)</i>
Q122	<i>“Yeah, ... The program is fulltime, and it is strictly residential.” (Principal five)</i>
Q123	<i>“...most of the extensors are married... so because of... allowing the non-residential option, we improved the number from 20 in 2015 to date when we have 30s..., still when the program was only residential, it used to get between 10 and 15, but sometimes it could even be less than 10.” (Principal one)</i>
Q124	<i>“So, it will still be consent from the employer...So if they consent, it is okay. It is favourable...If you can balance and make sure your work is moving on well, then they have no problem. But for example, ... during the time you are going to be placed for clinical experience, I think they would definitely release you because perhaps that is going to be like two months or three months ...So actually I agree, it’s much easier.” (EN2, Northern FGD)</i>
Q125	<i>“Hmm! That is what I wanted to talk about..., yeah, that you can go to school, maybe your employer supports you, then you make an agreement, after school you come back and work for them.” (EN6, Central FGD)</i>
Q126	<i>“What I can say is that ENs need to be supported to become RNs especially now with the demand from the East African Community they need to be helped to advance to the registered nursing level. ... the individual health facilities where they work need to support them to see that they [ENs] can be able to upgrade.” (Principal four)</i>
Q127	<i>“What we have seen is that people want to advance their career. However, there is a challenge that one may not be able to leave their place of work to come back for studies. So, basically, there is a challenge of getting study leave from the places of work. ... like the current ones [in the current group]; only 23 were able to report. there are many who fail to join the program because of those issues. And also, you can find someone has worked for over 10 years but has never been allowed/permitted to go for career upgrading.” (Principal four)</i>
Q128	<i>“It may not be that they [employers] don’t want them to upgrade, but they may be looking at them as human resource. They may be overwhelmed in the sense that if they have very few workers at the facilities, releasing the ENs for further studies becomes a problem. That is why many of them [ENs] stay at that low career level without coming back to upgrade.” (Principal two)</i>

Appendix 25 Statistics reference table

Statistic #	Statistic in detail
S1	When all the perceived barriers were hierarchically ordered they showed that insufficient income and personal finances (79.6%) was the second leading barrier
S2	ENs' earnings showed the median monthly income from their main jobs to have been UGX 500,000 [about 130 US dollars]
S3	Table 34: Workplace Barriers
S4	The second most preferred design of EN-RN education, whether or not the EN was given study leave was "fulltime with chronic night duty shifts" (24.6%), which is a derivative of the students' risky internal arrangement.
S5	And without study leave, again the second most preferred design was the "fulltime with chronic night duty shifts" (20.9%).
S6	Majority of participants 84.4% (n=357) reported aspiring for career advancement to the registered nursing (RN) level.
S7	The median duration of their aspiring to advance was 3 years, while about 10% of them had lived with the consideration for 8 years or longer.
S8	About 80% of the participants in the survey had completed the enrolment training in the period of 2010-2016, but only about 10% (n=41) had acquired additional trainings lasting at least one year or more.
S9	Of these (n=41), majority (70.7%, n=29) reported to have done diploma in clinical medicine (figure 9 under demographics section).
S10	The other trainings included health related courses like public health (n=4), midwifery (n=2), health management (n=1), and pharmacy (n=1).
S11	Others had ventured into non-health related courses like discipleship and evangelism (n=2), the armed forces [UPDF] (n=1), and law (n=1).
S12	The majority of the ENs responding to the survey 78% (n=329) had children while the median number of biological children was two (2).

S13	38.9% of ENs saw the requirement to take care of children limited or delayed the ENs chances of pursuing educational advancement to the RN.
S14	The majority of these ENs 65.9% were married or living with a spouse and hence had some form of spousal commitment
S15	Majority of the ENs (67.6%) were female
S16	When spouses were supportive, ENs perceived them as facilitators, and they sought financial or material support from them (76.0% n= 314) and encouragement (74.5 n=302).
S17	Majority of ENs 77.5% (n= 328) were staying with additional dependants who, in turn, chiefly comprised of siblings (62.3%) and about a third (37.5%) being parents as dependants.
S18	The Median number of dependants staying with ENs was 2 (IQR=1-3)
S19	Up to 40.5% felt that the lack of flexible program convenient for working nurses was a barrier for their advancement.
S20	Majority of the ENs 76.1% indicated that they needed support with availability of flexible RN programs within their physical access
S21	Majority of the ENs (63.8%) indicated the best time for an EN to advance to RN level, being immediately and/or within the first two years after completing the EN course, yet the two-year experience requirement stood in their way
S22	The two-year waiting time requirement for eligibility to advance and the processes involved in dealing with admissions were seen as barriers, 35.4% and 32.6% of the ENs respectively
S23	The barrier of high tuition cost was also reported in the subsequent survey with the majority of the ENs 85.8% acknowledging it as their barrier to the RN level career advancement
S24	ENs identified lack of tuition support as a barrier to advancement (79.3%); and hence regarded it as an important area for designing enablers.
S25	Further they showed that this support (tuition) was expected from employer (79.6%); student loan schemes for tuition fees (77.7%); and the spouse or other family members (76.0%).
S26	Up to 80% sought it (the installment payment system) as financial facilitator.

S27	The calculated average enrolment was 32 students against an average capacity of 62 positions for the programs whose principals were involved, revealing that programs were running at half their capacity.
S28	It emerged that some schools had failed to realise significant targets of their enrolments up to and more than 50% of their enrolment targets, suggesting that the magnitude of the problem was substantial.
S29	This (leaving early) was mainly due to commitments that they had to meet especially with their employment, but wanted to come to class and meet the required target for attendance of about 75%.
S30	Table 36: Admission facilitators
S31	ENs desired schedules that allowed them freedom over the weekends to be with their families (73.8%).
S32	Figure 12: Choice of RN education design with or without study leave
S33	Figure 13: Choice of RN education design with study leave
S34	Figure 14: Choice of RN education design without study leave
S35	Table 37: Top three education design choices under different EN leave arrangements
S36	Figure 15: Preferred education design innovation
S37	Beyond making residential arrangements optional, ENs also wanted to access accommodation as and when needed (75.3%).
S38	It was noted that 69.8% reported finding Baby or childcare facilities at the nursing school as a facilitator.
S39	They also desired Full-time access to internet (65.9%); and being treated as a mature individual (64.9%).
S40	Majority of ENs (73.3%) viewed 'Permission from employer to work flexible duties' as a facilitating factor for their advancement.
S41	Since ENs were supporting themselves to finance their EN-RN education, a key contribution that they sought from their employers was study leave with pay (79.4%).

Appendix 26: Themes, subthemes and codes for EN experiences

EN the person: experiences and aspirations		
Themes	Subthemes	Codes and their quote labels
Worries of unaffordability and unavailability	1. Insufficient personal finances	a. Low Salary: Q1, Q2, Q3, Q4, Q5, Q6 b. b. Saving difficulties: Q7, Q8
	2. Held and limited by employment	a. Workplaces unsupportive of advancement: Q9, Q10, Q11, Q12, Q13 b. Disfavour within the working environment: Q14, Q14 c. Risky chronic night shift arrangements: Q16, Q17, Q18, Q19, Q20, Q21, Q22, Q23
	3. Unmet advancement aspirations	a. Strong advancement Aspirations: Q24, Q25, Q26 b. Failed advancement attempts: Q27, Q28, Q29
Struggling with family responsibilities	1. Deprioritized by family responsibilities	a. Child-care and support. Q30, Q31, Q32, Q33, Q34 b. Spouse: protagonist or antagonist: Q35, Q36, Q37 c. Stretched by extended family roles: Q38, Q39, Q40, Q41
	2. Attitudinal or perception barriers	a. Age and Seasonality of advancement: Q42, Q43, Q44, Q45, Q46, Q47, Q48 b. In a hurry to finish: Q49, Q50 c. Want special treatment: Q51, Q52, Q53
Locked out of advancement	1. Inability to meet program schedules	a. Lack of conveniently scheduled advancement education: Q54, Q55, Q56, Q57, Q58 b. Lack of flexible RN programs within physical access: Q59, Q60, Q61 c. Small number of schools offering the EN-RN advancement program: Q62, Q63
	2. Unfavourable policies and procedures	a. Difficulty in dealing with admission processes and requirements: Q64, Q65, Q66, Q67, Q68 b. Challenges of relevant clinical experience required: Q69, Q70

Appendix 27: List of training undertaken

	Training	Provider	Relevance to study
6 th Nov 2017	Library resources for PGR students.	UoS	Vital for understanding different forms of plagiarism and proper citation management.
7 th Nov 2017	Doing a literature review for your PhD.	UoS	Was useful in learning the different styles of literature review and data sources.
	Introduction to qualitative research		Was useful in learning how to identify qualitative research questions and the general principles that go with this approach.
8 th Nov 2017	Theoretical frameworks and research questions.	UoS	Affirmed my understanding of utilization of theoretical frameworks in research.
	Critical writing and thinking		Was useful in learning how to move ideas through the thinking process to improve what gets written.
9 th Nov 2017	Working with others	UoS	Was useful in understanding teamwork dynamics and relationship expectations during the study.
	Introduction to quantitative data analysis		Had brief introduction to using SPSS. Will arrange a more detailed learning opportunity with Makerere University, http://www.musph.ac.ug/index.php/short-courses/196-short-courses-in-epidemiology-and-biostatistics
17 th Nov 2017	The ABC of the PhD journey	UoS	Provided vital journey testimony that was loaded with useful learning.

20 th Nov 2017	Introduction to conducting systematic reviews	UoS	Further opened my sight to this design and understanding of its correct applicability.
23 rd Nov 2017	Ethical issues in public health and the theoretical concepts related to ethics	UoS	Provoked my thinking on various applications of the ethical principles during the research process.
	Mixed methods research		Enlightening how to mix methods and the philosophical underpinnings driving it. Was useful to inform my interest and choice of methodology.
7 th Jan 2018	Literature search and Working with Turnitin	AKU	Useful opportunity to go into details of dealing with Boolean operators and relevant databases. Also worked with Turnitin and appreciated the software.
March – April 2018	Introduction to conducting a systematic review	UoS	Covered the usefulness of the systematic review. I appreciated that there are research questions that may not be answered by this design
	Adaptive leadership	Harvard	It was a side-line opportunity that turned out to be useful in informing how to navigate questions that may not have a clear answer.
June 2018	Module 1: Introduction to conducting systematic reviews	Cochrane	It was useful to understand the orderly process of a systematic review including its rigors.
	Module 2: Writing the review protocol		

	Fundamentals of Qualitative Research Methods (Curry, 2015) (total of 5 modules)	Yale University	This is a series of 6 videos on qualitative research spanning from conceptualization to analysis and reporting. It was quite useful and provided connection to other sources.
2 nd July 2019	Global Health Research	UoS	This exposed me to a greater awareness of the impact of research in society. As well the hurdles and challenges on the journey to building evidence.
9 th July 2019	What happens at IA	UoS	This was useful in understanding how to prepare for evaluations. While the focus was IA, the general outlook of the message in terms of preparation, timelines, checks and readiness was useful for IE too.
15 th July 2019	How to manage your supervisors	UoS	Was useful to understand multi supervisor relationships, expectations and responsibilities.
15 th -19 th July 2019	Writing Bootcamp (5 days)	UoS	It was an opportunity to meet other writers and to work at close range with help at arm's length.
22 nd July 2019	What happens at IE	UoS	It was a useful session to receive and consider what I'm expected to prepare for during the IE.

Appendix 28: Supervision meetings held

MONTH	DATE	TIME
November	Thursday 16 th 2017	2:00-3:30PM UK time
November	Thursday 23 rd 2017	2:00-3:30PM UK time
February	Wednesday 14 th 2018	2:00-3:30PM UK time
March	Friday 23 rd 2018	2:00-3:30PM UK time
May	Wednesday 13 th 2018	2:00-3:30PM UK time
July	Thursday 5 th 2018	2:00-3:30PM UK time
July	Thursday 26 th 2018	2:00-3:30PM UK time
August	Wednesday 29 th 2018	2:00-3:30PM UK time
December	Wednesday, 19 th 2018	2:00-3:30PM UK time
January	Wednesday, 23 rd 2019	2:00-3:30PM UK time
February	Wednesday, 6 th 2019	2:00-3:30PM UK time
February	Wednesday, 27 th 2019	3:00-4:30PM UK time
April	Wednesday, 3 rd 2019	2:00-3:30PM UK time
April	Wednesday, 24 th 2019	2:00-3:30PM UK time
July	Wednesday, 3 rd 2019	9:00-10:00am UK time
July	Tuesday, 9 th 2019	2:00-3:30PM UK time
July	Tuesday, 16 th 2019	2:00-3:30PM UK time

Appendix 29: Time Frame Gantt Chart

Research Activity	2018				2019				2020				2021	2022
	Jan-Mar	Apr-June	July-Sept	Oct-Dec	Jan-Mar	Apr-June	July-Sept	Oct-Dec	Jan-Mar	Apr-June	July-Sept	Oct-Dec		
Proposal development														
IA (Internal Assessment)														
Literature review														
Ethical approval UoS														
Ethical approval Uganda														
Data collection and analysis Phase one (FGD)														
IE (Internal Evaluation)														
Data collection and analysis Phase two (Survey)														
Data collection & analysis for Phase three (Interviews)														
Integrating multi-phase results to generate a new EN framework														
Final write up and submission														
Extension due to COVID disruptions														

Appendix 30: Budget

Ref No.	Expense Head	Nos.	Year 1	Year 2	TOTAL
1.	Personnel costs:				
2.	Research Assistants	1	7,200,000	1,200,000	8,400,000
3.	Transcriber	1	2,800,000		2,800,000
4.	Biostatistician		4,000,000		4,000,000
	TOTAL PERSONNEL COSTS	2	14,000,000	1,200,000	15,200,000
5.	Supplies and Consumables	Quantity			
6.	Office Supplies / Supplies / Stationery		1,000,000		1,000,000
7.	Computer related supplies	1	500,000		500,000
8.	Photocopy Supplies	1	500,000		500,000
9.	Printing of Survey instruments	523	1,673,600		1,673,600
10.	Audio Visual Supplies	1	500,000		500,000
	TOTAL SUPPLIES	526	4,173,600	-	4,173,600
	General and administrative expenses				

11.	Transportation costs		5,700,000	3200000	8,900,000
12.	Telephone Calls	2	1,000,000	100,000	1,100,000
13.	Workshops/ training sessions			2,200,000	2,200,000
	TOTAL general and administrative Expenses	2	6,700,000	5,500,000	12,200,000
	TOTAL AMOUNT REQUESTED		24,873,600	6,700,000	31,573,600

Appendix 31: Cadres of nursing and midwifery professionals in Uganda

1. Certificate
 - a. Enrolled Nurse
 - b. Enrolled Midwife
 - c. Enrolled Mental Health Nurse
 - d. Enrolled Comprehensive Nurse
2. Diploma
 - a. Registered Comprehensive Nurse
 - b. Registered Nurse
 - c. Registered Midwife
 - d. Registered Mental Health Nurse
3. Advanced diploma
 - a. Registered Health Tutor-Nursing
 - b. Registered Health Tutor- Midwifery
 - c. Registered Public Health Nurse
 - d. Registered Paediatric Nurse
4. Degree
 - a. Registered Bachelor of Science Nursing
 - b. Registered Bachelor of Science Midwifery
5. Registered Master of Science Nursing
6. PhD

Appendix 32: FGD Participant details

Northern Region

	TITLE/ CADRE/RANK	CATEGORY OF WORKPLACE (GOVERNMENT /PFP/PNFP)	FACILITY LEVEL (HOSPITAL/ HEALTH CENTRE)	WORKING EXPERIENCE (NO. OF YEARS)	UPGRADING STATUS (IN SCHOOL/ NOT IN SCHOOL)	AGE
1.	Enrolled comprehensive nurse but approved as enrolled nurse	Government	Health centre	9 years	Not in school / not upgraded	33 years
2.	Enrolled comprehensive nurse but appointed as enrolled nurse	Government	Health centre	9 years	Not in school / not upgraded	32 years
3.	Enrolled nurse	Government	Health centre II	13 years	Not in school / not upgraded	32 years
4.	Enrolled comprehensive nurse working as enrolled nurse	Government	Health centre II	6 years	Not in school & not upgraded	33 years
5.	Enrolled comprehensive nurse appointed as enrolled nurse	Government	Health centre IV	6 years	Not in school & not upgraded	31 years
6.	Enrolled nurse	Government	Health centre IV	30 years	Not in school	57 years
7.	Enrolled comprehensive nurse appointed as enrolled nurse	PNFP	Health centre	5 years	Not in school & not upgraded	26 years
8.	Enrolled comprehensive nurse but appointed as enrolled nurse	Government	Health centre	6 years	Not in school	32 years
9.	Enrolled	Government	Health centre	12 years	Not in school & not upgraded	39 years
10.	Enrolled comprehensive nurse	PNFP	Health centre	3 years	Not in school	--

Central Region

No	TITLE/ CADRE/RANK	CATEGORY OF WORKPLACE (GOVERNMENT /PFP/PNFP)	FACILITY LEVEL (HOSPITAL/ HEALTH CENTRE)	WORKING EXPERIENCE (NO. OF YEARS)	UPGRADING STATUS (IN SCHOOL/ NOT IN SCHOOL)	AGE
1.	Enrolled nurse	Government	Hospital	3 years	Not in school	27 years
2.	Enrolled nurse	Government	Hospital	5 years	Not in school	25 years
3.	Enrolled nurse	PFP	Hospital	3 years	Not in school	27 years
4.	Enrolled nurse	PFP	Hospital	4 years	Not in school	31 years
5.	Enrolled nurse	PNFP	Hospital	5 years	In school	25 years
6.	Enrolled nurse	PNFP	Hospital	19 years	Not in school	42 years
7.	Enrolled nurse	Government	Hospital	7 years	Not in school	37 years
8.	Enrolled nurse	PNFP	Hospital	13 years	Not in school	37 years

Eastern Region

No	TITLE/ CADRE/RANK	CATEGORY OF WORKPLACE (GOVERNMENT /FPF/PNFP)	FACILITY LEVEL (HOSPITAL/ HEALTH CENTRE)	WORKING EXPERIENCE (NO. OF YEARS)	UPGRADING STATUS (IN SCHOOL/ NOT IN SCHOOL)	AGE
1.	Enrolled comprehensive nurse	Government	Health centre	8 years	Not in school	30 years
2.	Enrolled Nurse	Government	Health centre III	19 years	Not in school	43 years
3.	Enrolled Nurse	Government	Health centre III	10 years	Not in school	36 years
4.	Enrolled	Government	Health centre	13 years	Not in school	47 years
5.	Enrolled	Government	Health centre	3 years	Not in school	28 years
6.	Enrolled comprehensive nurse	Government	Health centre	4 years	Not in school	31 years
7.	Enrolled nurse	Government	Health centre	11 years	Not in school	37 years
8.	Enrolled nurse In-charge	Government	Health centre	5 years	In school	27 years
9.	Enrolled comprehensive nurse	Government	Hospital	5 years	Not in school	--
10.	Enrolled comprehensive nurse	Government	Health centre	5 years	Not in school	28 years
11.	Enrolled comprehensive nurse	Government	Health centre	8 years	Not in school	34 years
12.	Enrolled	Government	Health centre	3 years	Not in school	25 years

Western Region

No	TITLE/ CADRE/RANK	CATEGORY OF WORKPLACE (GOVERNMENT /PFP/PNFP)	FACILITY LEVEL (HOSPITAL/ HEALTH CENTRE)	WORKING EXPERIENCE (NO. OF YEARS)	UPGRADING STATUS (IN SCHOOL/ NOT IN SCHOOL)	AGE
1.	Enrolled nurse in charge	Government	Health centre	15 years	Not yet upgraded & not in school	39 years
2.	Enrolled nurse, In charge	Government	Health centre	8 years	Not yet upgraded & not in school	37 years
3.	Enrolled nurse	Government	Hospital	11 years	Not in school	40 years
4.	Enrolled nurse	Government	Hospital	3 years	Not in school	38 years
5.	Enrolled nurse	PNFP	Health centre	8 years	Not in school	29 years
6.	Enrolled nurse, In charge	Government	Health centre II	15 years	Not upgraded & not in school	57 years
7.	Enrolled nurse	Government	Health centre II	10 years	Not in school	41 years
8.	Enrolled nurse	Government	Hospital	30 years	Not upgraded & not in school	53 years