



**Organizational Citizenship Behavior, Identification,  
Psychological Contract and Leadership Frames: The  
Example of Primary School Teachers in Taiwan**

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Manuscripts

Review

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3 **Organizational Citizenship Behavior, Identification, Psychological Contract and Leadership**  
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5 **Frames: The Example of Primary School Teachers in Taiwan**  
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11 **Abstract**  
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14 *Purpose (mandatory)* The study examines organizational citizenship behavior (OCB) by combining  
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17 two heterogeneous perspectives, integrating OCB-related factors at work using both personal and  
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20 organizational perspectives, thus contributing to our knowledge of OCB.  
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26 *Design/methodology/approach (mandatory)* Two studies are conducted using surveys in Taiwan  
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29 with a snowball sampling technique to enlarge participation. Study 1 analyzes the relationships  
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32 between organizational identification, expected psychological contract, perceived psychological  
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35 contract and OCB. Study 2 analyzes the relationship between OCB and principals' (or head  
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38 teachers') leadership frames.  
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44 *Findings (mandatory)* Study 1 finds that organizational identification is an antecedent of OCB and  
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47 that expected psychological contract moderates the organizational identification-OCB relationship.  
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50 Study 2 finds that the symbolic leadership frame is the only antecedent of OCB and that different  
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53 leadership frames influence each other in predicting OCB. Expected psychological contract is found  
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56 to moderate the organizational identification-OCB relationship, indicating that primary school  
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59 teachers' with higher levels of expected psychological contract are more likely to demonstrate OCB  
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3 at school. Interestingly, perceived psychological contract did not demonstrate such a moderating  
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5 effect.  
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11 *Originality/value (mandatory)* The study makes three contributions. First, we analyze composite  
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13 OCB via Identity and Psychological Contract theories (Study 1). Second, we scrutinize specific  
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15 aspects of OCB via Leader-Member-Exchange and Leadership Frame theories. These aspects  
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17 include assisting colleagues, job commitment, working morale and non-selfish behavior (Study 2).  
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20 Third, we increase understanding of primary school teachers' OCB, discussing important  
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22 implications for school principals and human resource managers as well as perhaps others in similar  
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24 sectors.  
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34 Key words: *Organizational Citizenship Behavior; Leadership; Identification; Psychological*  
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37 *Contract; Primary School Teachers; Principals.*  
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## Introduction

The concept of organizational citizenship behavior (OCB) continues to be of great interest among practitioners and academics (Cheng *et al.*, 2013; Coyle-Shapiro, Kessler, and Purcell, 2004; Hui *et al.*, 2008; Jiao, Richards, and Hackett, 2013; Snape and Redman, 2010). OCB is defined as employees' proactive and extra-role behavior that goes beyond contractual obligations, that is, activities which are not part of contracts or enforced via formal procedures (e.g. Christ *et al.*, 2003; Organ, 1988; Stobel *et al.*, 2013). It is suggested that OCB acts as a 'behavioral catalyst', promoting commitment (Bogler and Somech, 2004; Chang and Smithikrai, 2010), reducing absenteeism (Cohen and Keren, 2010) and enhancing skill development (Dalal, 2005), which in turn leads to higher productivity and efficiency (e.g. Carpenter, Berry, and Houston, 2014; Somech and Ron, 2007; Spence, Ferris, Brown, and Heller, 2011).

OCB research has been dominated by work on business sectors, corporate organizations and higher education. Little attention has been given to other contexts, such as primary schools, despite a common belief that OCB is fundamental to school success (e.g. Chang, Cheng, and Hsieh, 2011; Oplatka, 2009). The contribution primary school teachers (PST) make towards teaching the young and their development is also widely recognized (Torrington and Weightman, 1989; HMI, 2011). Also, it is argued that to enrich the teaching and learning environment, teachers could go beyond the explicit demands of their role in a voluntary capacity, a typical OCB characteristic (DiPaola and Tschannen-Moran, 2001; Koh, Steers, and Terborg, 1995). These characteristics have wider

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3 relevance to other contexts and sectors, not only in education, but also other services where the  
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5 labor process is more opaque and difficult to manage.  
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11 Of importance to understanding OCB is the school principal (or head teacher)-teacher relationship  
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13 and leadership (e.g., Restubog, Bordia, Tang, and Krebs, 2010; Turnipseed and Rassuli, 2005).  
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17 Different leadership frames (LF) facilitate different employee behaviors in the workplace (e.g.,  
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19 Bolman and Deal, 1990; Chi, 2008). Beliefs about managerial and leadership effectiveness  
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21 influence the strategies used to achieve organizational goals (von Krogh *et al.*, 2012). It is proposed  
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23 that a balanced, multi-LF orientation yields the most effective management (Thompson, 2000).  
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27 However, few studies have investigated the links between multi-LFs on OCB in the PST-school  
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29 principal relationship and how these interact with each other (Mascall *et al.*, 2008). Again, this  
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31 question is of wider interest and applicability for other contexts and sectors beyond education.  
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39 Our study examines OCB-related factors at work using both individual and organizational  
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41 perspectives. To the best of our knowledge it is the first to study PST's OCB using both individual  
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43 and organizational approaches in a single, comprehensive study. Organizational Justice and Social  
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45 Exchange theories are more group/organizationally based (Gong, Chang, and Cheung, 2010; Van  
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47 Dyne, Kossek, and Lobel, 2007), whereas Person-Organization Fit Theory is more personally based  
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49 (Fuchs and Edwards, 2012; Podsakoff *et al.*, 2014). Our research aims to clarify the behavioral  
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51 mechanisms of OCB by integrating two heterogeneous perspectives, thus contributing to our  
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3 knowledge of OCB and its management.  
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9 To help fill this important research gap on PST's OCB we ask: what is the relationship between  
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11 PST' identification, psychological contract (PC), principals' LF, and OCB? By doing this the study  
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13 makes three contributions. First, we analyze PST's composite OCB via Identity and PC theories  
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15 (Study 1). Second, we scrutinize specific aspects of OCB via Leader-Member-Exchange (LMX) and  
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17 LF theories. These aspects include assisting colleagues, job commitment, working morale and  
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19 non-selfish behavior (Study 2). Third, we increase understanding of PST's OCB, discussing  
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21 important implications for school principals and human resource (HR) managers (Bartunek and  
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23 Rynes, 2010) as well as other sectors (e.g., Restubog, Bordia, and Tang, 2007). Using the context of  
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25 Taiwan, the study further contributes to literature with a perspective from a little researched context.  
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34 Taiwan is currently facing great challenges with an ultra-low birthrate, which suggests that in the  
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36 next decades, the primary school population will fall significantly. Hence, the study of OCB in  
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38 primary schools and the implications from such approach may assist in the development of a  
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43 sustainable competitive advantage and long-term survival of the school.  
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#### 49 **Literature review and theoretical framing**

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52 OCB is generally defined as behavior that goes beyond the formal requirements of the job and is  
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54 beneficial to the organization (Chang & Smithikrai, 2010). Examples of OCB may include assisting  
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58 colleagues with their tasks, devoting time to assist new entrants to the organization, defending their  
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3 organizational reputation, or even voluntary salary-cut to support the organizations. OCB is an  
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5 individual behavior that is discretionary, not directly or explicitly recognized by the formal reward  
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7 system (Organ, 1988). Three critical elements of OCBs are: (1) discretionary behaviors, not part of  
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9 the job description and performed as a result of personal choice; (2) going above and beyond  
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11 enforceable requirements of job descriptions; (3) contributing positively to overall organizational  
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13 effectiveness. Numerous studies explore the benefits of OCB for organizations' well-being (e.g.  
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15 LePine *et al.*, 2002) and findings indicate that employees' spontaneous and voluntary OCB are key  
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17 to improving teamwork effectiveness, efficiency and workplace climate (Organ and Ryan, 1995).  
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21 From an organizational perspective, OCB can be a crucial aspect of an employee's behavior that  
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23 contributes to overall organizational effectiveness. Podsakoff, Ahearne and MacMenzie (1997) have  
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25 discovered that higher levels of OCB among employees are associated with the overall productivity  
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27 and fewer defects. Spector (2006) claims that OCB is most likely to occur when employees are  
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29 satisfied with their jobs, have high levels of affective commitment, feel they are treated fairly, or  
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31 have good relations with their colleagues. Bommer, Miles and Grover (2003) claim that OCB is  
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33 contagious, as people who work in groups where people tend to demonstrate OCB are more likely  
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35 to perform OCB themselves. Diefendorff, Brown Kamin and Lord (2002) also indicated that OCB  
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37 is predicted by the roles of job involvement and work centrality. Consequently, managers are  
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39 advised to promote OCB (e.g. Coyle-Shapiro *et al.*, 2004; Dalal, 2005; Ellinger *et al.*, 2011).  
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2 A review of work on OCB formation reveals that the concept is underpinned by three major theories.  
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5 First, *Organizational Justice Theory*, which argues organizational justice is an individual's  
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8 perception of, and reaction to, fairness in an organization (Greenberg, 1987). To increase  
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11 organizational justice, the personnel appraise the organizations' actions and decisions with ongoing  
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14 assessment of employees' attitudes and behaviors towards equity and fairness. Studies show that  
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17 justice is a key element leading to OCB (Yilmaz and Tasdan, 2009).  
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23 Second, *Social Exchange Theory*, which postulates that all human relationships are formed by the  
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26 use of subjective cost-benefit analysis and a comparison of alternatives (Blau, 1964). The  
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29 availability of alternatives determines the longevity of the relationship (Konovsky and Pugh, 1994).  
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32 This contrasts with the justice principle as it is less altruistic (Hui *et al.*, 2000) and suggests that  
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35 OCB is a tactic for seeking desired outcomes, and once achieved, OCB decreases immediately.  
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41 Third, *Person-Organizational Fit Theory*, which refers to the compatibility between a person and  
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44 organization. This emphasizes the extent to which a person and organization share similar  
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47 characteristics or meet each other's needs (Chatman, 1989). Studies confirm this fit among  
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50 organizational performance and employee well-being (Bommer *et al.*, 2003). Specifically, when  
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53 there is person-organizational fit, OCB makes a positive contribution to organizational effectiveness,  
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56 providing a powerful heuristic for managers and organizations (Spector, 2006).  
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3 Following this line of research, the current study investigates to what extent the above theories and  
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5 findings are applicable to a critical sector and group of employees – primary school teachers. We  
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7 initially focus on the organizational context, an important variable in understanding OCB, not least  
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9 as motivators within profit making organizations may not apply to the public sector (Somech and  
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11 Drach-Zahavy, 2004). We posit that OCB in primary schools differs in both qualitative and  
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13 quantitative ways from business organizations and private enterprises. Primary schools are normally  
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15 non-profit making, remunerated following clear nationally agreed pay scales (Lin and Chen, 2006)  
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17 and operate within a more flexible and loose structure than most profit making enterprises. Hence,  
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19 analyzing OCB in the primary schools is necessary and the findings will contribute to the  
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21 understanding of OCB theories.  
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### 34 *OCB in Primary Schools*

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37 OCB within educational settings has received some attention, although predominantly at high  
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39 school and college (e.g., Hsieh, Lang, and Chen, 2010) and not primary school levels. In spite of  
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41 this, research within the educational context still offers some valuable insights into OCB and  
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43 primary school teachers, although with some inconsistencies in findings. For example, OCB is  
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45 influenced by membership, support at work and job satisfaction with reduction (or absence) in OCB  
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47 where teachers report deficiencies in organizational justice (Cheng, 2004). Other studies of high  
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49 schools and primary schools affirm the role of school membership as an antecedent of OCB but that  
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51 organizational justice, support at work, and job satisfaction are not (Jiao, 2013; Moorman, 1993).  
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3 Indeed, HR management (HRM) practice and OCB is moderated by loyalty towards the school and  
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5 similarity of colleagues (Chang *et al.*, 2011). That is, loyalty and similarity of colleagues buffer the  
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7 negative impact of poor HR practice on OCB. This further explains that an individual's engagement  
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9 in OCB activities reflects their affinity towards organizational identification. In contrast to studies  
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11 which regarded OCB as a composite construct, Hsieh *et al.* (2010) argue that OCB in primary  
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13 schools is a multi-dimensional construct (Marinova, Moon, and Van Dyne, 2010) and conduct a  
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15 series of questionnaire surveys to confirm that PST's OCB comprises several sub-constructs,  
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17 namely: assisting colleagues, job commitment, working morale and non-selfish behavior. In the  
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19 next section we develop our framework and corresponding research hypotheses.  
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## 32 **Research framework and hypothesis development**

### 33 *OCB and Organizational Identification*

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37 Researchers affirm that PST's OCB is associated with several factors. Specifically, we find three  
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39 important findings on OCB, which is seen as: (1) apparent within educational contexts; (2)  
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41 influential to PSTs well-being and school performance; (3) associated with several key factors.  
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44 Based on these points, we utilize an umbrella term, *Organizational Identification* (OID), to  
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46 encompass *school membership*, *school loyalty* and *colleague similarity*. In order to further explain  
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52 OCB, we add OID to our research framework.  
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OID is a specific form of social identification and based on three components: *similarity*,

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3 membership and loyalty (e.g. Patchen, 1970). Cheney (1982) develops a scale to measure OID,  
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6 albeit subsequently criticized for conflating two related, but theoretically distinct constructs:  
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9 organizational commitment (OC) and OID (Gautam, van Dick, and Wagner, 2004). Several  
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11 justifications for the OC-OID distinction are offered, namely the: (1) fluidity of OID and relative  
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13 rigidity of commitment (Major, Morganson, and Bolen, 2013; Wagner and Ward, 1993); and (2)  
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16 proposition that the development of OC and OID stem from different sources. OID emerges from  
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18 shared outcomes and perceived similarity, while OC is contextualized within Social Exchange  
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20 Theory (Tyler and Blader, 2000). The distinctions are hypothesized to be significant. On the one  
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23 hand, an individual's OID supports their organization through a fundamental sharing of ideals and  
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26 goals by their own choice. On the other hand, an individual's commitment is more likely to conform  
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29 to rules and regulations because it is expected of them as an employee (Pratt, 2000; Somech and  
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32 Bogler, 2002).  
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40 Based on Cheney (1982), Gautam *et al.* (2004) develop an OID short form scale which comprises  
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42 just 8 of the original items. This scale reduces the correlation between OID and the 4 hypothesized  
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44 forms of commitment, distinguishing OC from OID, a distinction considered as both practically and  
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47 theoretically useful. Gautam *et al.* (2004) suggest that employers should foster OID because it is  
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50 about employees' choice and preparedness to move with an organization in times of change as it  
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53 provides beliefs and values that remain congruent and managers benefit from recognizing that  
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56 strategies to encourage OC may do little to enhance OID. Thus, the conceptual difference should be  
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OID is important to organizations as it provides positive outcomes for work attitudes and behaviors (Gautam *et al.*, 2004). Ashforth *et al.* (2008) offer 4 reasons why OID is important. First, it affects self-identity concepts. Through OID people define themselves, make sense of their place in the world and appropriately navigate their worlds. Second, it is an essential human trait to identify with and feel part of a larger group. By identifying with an organization, people fulfill this need as well as the need to enhance their *self*. Third, it is associated with organizational outcomes. For example, employee performance and retention are key elements for any organization. Fourth, it is shown in studies to have relationships with justice perceptions and the meaning of work. We posit that these characteristics leads to OCB due to committed behavior that leads to extra-role function beyond contractual agreements. Thus, we propose Hypothesis 1:

*H<sub>1</sub>: OID will be positively correlated with OCB*

OID studies indicate that the commitment element (traditionally subsumed within OID measures) may obscure the relationship between OID and OCB (Pratt, 2001; Wagner and Ward, 1993). OID reflects a way of viewing the organization relative to one's own identity, so changes within the organization may influence individual OID accordingly (Carroll, 1995; van Dick, Grojean, Christ, and Wieseke, 2006; van Dick and Wagner, 2010). For these reasons, we propose to add a new variable to our research framework, the PC.

### *OCB and the Psychological Contract*

The PC represents the relationship between the individual and employer (Noer, 1993) and is an employee's perceptions of their exchange relationship with the employer (Herriot *et al.*, 1997). We posit that the PC is useful in explaining OCB at primary schools for three reasons. First, the PC is a process of mutual expectation arising from an organization-individual relationship (George, 2009; Kelley-Patterson and George, 2001) or the sum of mutual expectations (Meckler, Drake, and Levinson, 2003). Studies show that the PC contributes to organization dynamics and altruistic behavior (e.g., Irving and Bobocel, 2002; Scholarios *et al.*, 2009). From a managerial perspective (e.g., HR interventions), enhancing the PC yields financial rewards (Seeck and Parzefall, 2008).

Second, the PC is associated with both OID and OCB; for example, Restubog *et al.* (2008) and Arain *et al.* (2012) have explored the PC-OID relationship, whereas ample studies have examined PC-OCB relationship in the past (Zhao *et al.* 2007). It is asserted to be reciprocal, embedded in beliefs of mutual obligation in the employee-employer relationship and exchange agreements (Rousseau, 2001). The PC is also described as subjective and idiosyncratic. Individual employees hold different views (or definitions) of the PC and respond to their organization in manners congruent with their views (Kelley-Patterson and George, 2001). Third, the PC retains an implicit quality, i.e. it is neither articulated nor written and may only be apparent when breached. A breach results in feelings of violation, for example, employees may feel disappointed with their

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2 organization and subsequently engage in counter-productive behaviors (Chen *et al.*, 2008; Dalal,  
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5 2005; George, 2009; Irving and Bobocel, 2002). Thus, a satisfactory PC serves to reduce the  
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8 likelihood of counter-productive behaviors, increasing the probability of altruistic behavior within  
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11 an organization.  
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17 We identify two types of PC (based on Lin and Chen, 2006) within primary school settings. Type I  
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19 refers to the '*contract of organizations*'. This contract indicates how schools should perform and  
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22 what services/policies should be practiced (i.e. PST's attitudes and beliefs about schools in general  
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25 terms and their preconceived ideas). We refer to this as the '*Expected PC*' (EPC). Type II describes  
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28 the '*contract of PSTs*'. This contract indicates how schools are managed and what service/policies  
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31 are actually practiced (i.e. PST's actual experience of their school). We refer to this as the  
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34 '*Perceived PC*' (PPC). Researchers confirm that, compared with traditional PC scales (e.g., Herriot  
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37 *et al.*, 1997), the EPC-PPC typology is more efficacious in describing PSTs' psychological  
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40 experiences, attitudes and feelings at school. We note that their difference lies in the first being an  
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43 expectation and the latter actual perception, which may not always be the same, but even so both  
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46 types contribute to the organizations' dynamics and employees' display of altruistic behavior.  
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52 We propose that both EPC and PPC will moderate the above OID-OCB relationship. Specifically,  
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55 we posit that the influence of both EPC and PPC decreases the OID-OCB relationship. This is  
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58 because of PSTs' EPC and PPC, considered to include their psychological experiences, attitudes and  
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3 feelings at school, impacts on their OCB (Lin and Chen, 2006). Researchers confirm that EPC and  
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6 PPC is efficacious to describe PSTs' cognitive and affective behavior and that these influence their  
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9 OCB (Kempster and Iszatt-White, 2013). Previous studies, however, have not investigated the EPC  
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11 and PPC as moderators to OID-OCB relationships. Therefore, partly consistent with previous  
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14 findings, we propose Hypotheses 2 and 3:

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17 *H<sub>2</sub>: EPC will moderate the OID-OCB association*

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20 *H<sub>3</sub>: PPC will moderate the OID-OCB association*

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26 To acknowledge discrepancy between the individual's expectation and reality as they experience it,  
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28 we examine the difference between EPC and PPC and how the discrepancy relates to OCB. As  
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31 previously established, we term this difference, DPC. We do not explore an actual contract breach  
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34 on the employer's part, but examine the *variance* between what employees' feel is appropriate  
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37 practice and their actual experience of how the school operates. That is, we explore the difference  
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40 between expectations and perceived reality and whether the difference serves as a useful antecedent  
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43 of OCB. Specifically, we posit that the greater the difference between the EPC and PPC, the lower  
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46 the level of OCB. Accordingly, we propose Hypothesis 4:

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49 *H<sub>4</sub>: DPC will be negatively correlated with OCB*

#### 50 51 52 53 54 55 *OCB and Principals' Leadership Frames*

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58 School principals (or heads) are typically senior figures serving as the top managers of their schools  
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2 and responsible for strategic decision-making, management and overall school performance. The  
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5 principal-teacher relationship is important to understanding PST's OCB. According to LMX Theory  
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8 (Deluga, 1998), leaders (e.g., principals) develop an exchange with each of their subordinates (e.g.,  
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11 PSTs) and the quality of these LMX relationships influences subordinate responsibility, decision  
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14 influence, access to resources and performance. Thus, LMX provides insight and support towards  
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17 principals' management and leadership related to the occurrence of PST's OCB.  
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23 Leaders tend to favor certain LFs over others (Bolman and Deal, 1990). However, a single LF style  
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26 may limit ability to address situations and solve problems. In contrast, some leaders are confident  
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29 they can utilize different LFs when faced with varying situations/demands. Thompson (2000) adds  
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32 that LFs have empirically defensible classification procedures appropriate for a range of  
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35 organizations and contexts.  
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41 Research on school principal's LF has investigated impact on school performance. For example,  
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44 Cheng (2004) shows that a symbolic/transformational LF is of particular importance because this  
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47 best emulates organizational goals and values. Based on our discussion, we posit that findings  
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50 suggest an important association between principals' LF and PST's OCB. Specifically, research  
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53 shows that different LFs facilitate employee behaviors in the workplace (e.g., Bolman and Deal,  
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56 1990; Chi, 2008). We note that principals' management and leadership relate to PST's OCB (e.g.,  
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59 Deluga, 1998). For example, PST's OCB comprises of positive behavior, such as assisting  
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colleagues, job commitment, working morale, along with non-selfish behavior (Hsieh *et al.*, 2010).

In light of prior studies and consistent with their findings, we propose Hypothesis 5:

*H<sub>5</sub>: LF will be positively correlated with OCB aspects*

While principals have different leadership styles, some commonalities may exist (Cheng, 2004; Cheng *et al.*, 2013). For example, good leadership styles include belief in shared governance and ability to listen and to build consensus. Differences are mainly evident in the strategies used to achieve these goals. A number of LFs are proposed as appropriate in primary schools. Bolman and Deal (1990) demonstrate LFs help understand leaders' beliefs about managerial and leadership effectiveness. Thompson (2000) proposes the most effective management comes from a balanced, multi-LF orientation of a: (1) *Structural frame*: formal rules and hierarchy of the organization; (2) *HR frame*: people's needs within the organization; (3) *Political frame*: the conflict and maneuvering by groups interested in the organizations' finite resources, (4) *Symbolic/transformational frame*: the organizations' intangible aspects, such as culture, inspiration, myths, ceremony and rituals (Bolman and Deal, 1997). Specifically, researchers note an inconsistency between multi-LFs. Bolman and Deal (1997) demonstrate that effective leaders are multi-framed, implying that certain LFs may be more useful than others to address a particular situation and suggest that good leaders are confident of adopting different LFs to meet varying situations. We posit that each LF has both merits and constraints, so different LFs may not work well together, consequently reducing the occurrence of OCB. In view of this discussion, we propose Hypothesis 6:

*H<sub>6</sub>: Different LFs will influence with each other in predicting OCB*

## Method

### *Research Context*

The chosen context of primary schools in Taiwan is of interest to our study for several reasons: (1) Taiwan faces severe challenges with a decreasing birthrate, considered one of the world's lowest birthrates (The Conversation, 2016), which ultimately affects the existence of primary schools; hence OCB may pose an important approach to adding value and differentiation. (2) Primary schools exist for the purpose of educating the young and contribute towards society as a whole, thus very different than the business context, where most of the OCB research takes place. (3) The collectivistic culture of Taiwan is clearly different from Western culture, with for example, higher inequality between people in terms of power distribution and a lower score on individualism than those in developed countries (Hofstede, 1984); thus the findings from Taiwan can be a model for other newly emerging economies (Nguyen and Rowley, 2015). The values and norms of Taiwanese employees have strong roots in Buddhism and Taoism, yielding another interesting aspect to the study of OCB.

### *Study 1 - Research Design and Participants*

We contacted the school administration of all the primary schools (150) in North West Taiwan, considered as the most government resource supported area. Schools in this region are generally

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3 stable with sufficient staff and students, hence suitable for our research. Of these, 38 schools  
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6 responded and agreed to participate. To ensure the appropriateness of our sample we used only  
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9 incumbent PSTs via HR offices/managers and administrators at each school (with no direct contact  
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11  
12 with PSTs). Within these schools we employed a convenience sampling technique to enlarge PST  
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15 participation. HR staff did not 'pick' teachers as our questionnaire was simply embedded within the  
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18 annual appraisal questionnaire (sent via corporate email) when it was distributed. The questionnaire  
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21 included a cover-letter assuring anonymity, voluntary participation and research outline. Seven days  
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23  
24 after the initial invitation we emailed reminders to boost the response rate. Questionnaires were  
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27 emailed back to the researchers directly (not via schools). The survey was carried out from  
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30 June-September 2011. Of the 620 questionnaires distributed, 574 were returned, of which 547 were  
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33 useable, an 88.23% response rate.

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37 Overall, 73.13% of the teachers were female and 77.41% were graduates. By age group they were:  
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40 30 years old or younger (15.53%), 31 to 40 years old (51.74%), and 41 years old and older  
41  
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43 (32.72%). By service length (i.e., employment tenure) they were: 1-5 years (28.52%), 6-10 years  
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46 (28.33%), 11-15 years (23.40%), and 16 years and over (19.93%). We acknowledge the following  
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48  
49 two challenging points with our approach. First, we could not tell who had not responded and hence  
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52 could not contact them to further increase the response rate. Second, we could not control any  
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55 selection criteria, except for PST incumbent status, thus we could only use what we received.

### Measurement

We adopted a cross-sectional approach to measure all variables, with an anti-Common Method Variance (CMV) strategy. Previous management-related studies have used cross-sectional studies in the study of OCB (e.g. Gautam, Dick, and Wagner, 2004; Glomb *et al.*, 2011; Lu *et al.*, 2010; Ten Brummelhuis and Van Der Lippe, 2010).

We utilized four standardized scales, as following.

*OID* was measured by Gautam *et al.*'s (2004) scale (8 items;  $\alpha = .94$ ). Sample items included: “*I often describe myself to others by saying I work for [x school] or I am from [x school]*”; “*I am proud to be an employee of [x school]*.” X stands for participants' schools. Responses used a 5-point Likert scale (1 = completely disagree, 5 = completely agree). Higher scores meant higher levels of *OID*.

*EPC* was measured by Lin and Chen's (2006) scale (20 items;  $\alpha = .87$ ). Sample items included: “*The school should provide staff with safe working conditions*” and “*The school should provide sufficient resources, equipment and relevant materials.*” Responses used a 5-point Likert scale (1 = completely disagree, 5 = completely agree). Higher scores meant higher levels of expectation, indicating stronger *EPC* towards their schools.

*PPC* was measured by Lin and Chen's (2006) scale (24 items;  $\alpha = .84$ ). Sample items included: “*The school has a good communication system*” and “*The school respects every single employee.*” Responses used a 5-point Likert scale (1 = never, 5 = always). Higher scores meant more positive

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2 experiences (higher levels of PC at school).  
3

4  
5 OCB was measured by Cheng's (2004) scale (20 items;  $\alpha = .94$ ). We selected this scale because it  
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8 was explicitly designed to measure PST's OCB and was culturally applicable, being designed with  
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11 Taiwanese PST's in mind. Sample items included: "I am willing to make suggestions to the school  
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13 and carry out administrative tasks with all my efforts" and "I always support and help new  
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15 colleagues, even if they do not ask for help." Responses used a 5-point Likert scale (1 = completely  
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17 disagree, 5 = completely agree). Higher scores meant higher levels of OCB.  
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#### 26 *Back Translation Procedure*

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28 As the OID scale was originally developed and validated in English, we translated all items into  
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30 traditional Chinese. We employed a back-translation procedure to ensure language equivalence and  
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32 appropriateness. We subsequently invited two experts to examine the validity and clarity of scale  
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34 items. Revisions were made accordingly.  
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#### 43 *Findings*

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45 We report inter-correlations ( $r$ ), means ( $M$ ), standard deviations ( $SD$ ), and reliability ( $\alpha$ ) of all  
46  
47 variables in Table 1. These statistics showed that OCB is positively correlated with EPC ( $r = .40, p$   
48  
49  $< .01$ ), PPC ( $r = .34, p < .01$ ) and organizational identification ( $r = .55, p < .001$ ). These preliminary  
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51 findings conveyed two important messages. First, when OCB moves, other variables move along  
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53 with it. Second, the significant inter-correlations provided sound foundations for further analyses.  
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INSERT TABLE 1 ABOUT HERE  
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*Hypothesis 1.* We conducted regression analyses, by which: (1) OID was regarded as an antecedent to OCB; (2) EPC and PPC as potential moderators; (3) OCB as an outcome variable. Results showed that both OID ( $\beta = .50, p < .001$ ) and EPC ( $\beta = .31, p < .001$ ) significantly predicted OCB, indicating that both OID and EPC were strongly correlated with OCB. This finding was coherent with prior correlation analysis, i.e., OID was positive correlated with OCB ( $r = .55, p < .001$ ). Hence, Hypothesis 1 was supported.

*Hypothesis 2.* Moderation analyses revealed: (1) EPC showed a moderating effect on the OID-OCB association ( $\beta = 2.10, p < .001$ ); (2) the influence of EPC on OCB reduced ( $\beta = .01, p = .14$ ); (3) EPC moderated such association (interaction  $\Delta R^2 = .56^{***}$ ) (See details in Table 2). These findings indicated that EPC facilitated OCB in line with OID. When PSTs had higher levels of EPC they were more likely to demonstrate OCB. Hence, Hypothesis 2 was supported.

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INSERT TABLE 2 ABOUT HERE  
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*Hypothesis 3.* We adopted the same analytic procedures to examine the moderating effect of PPC. Results showed that such effect was not statistically significant (interaction  $\Delta R^2 = .04$ ), i.e., Hypothesis 3 was *not* supported.

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3 *Hypothesis 4.* We created a new variable, i.e., DPC (the difference between EPC and PPC), for  
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5 analytic purposes. We employed a linear regression analysis (2 models): In model 1, EPC predicted  
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7 OCB ( $\beta = .40, p < .001, F(1, 547) = 104.50.10, p < .001, \Delta R^2 = .16^{***}$ ). In model 2, both EPC ( $\beta$   
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9 = .59,  $p < .001$ ) and DPC ( $\beta = -.34, p < .001$ ) predicted OCB ( $F(2, 546) = 87.10, p < .001; \Delta R^2$   
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11 = .24\*\*\*;  $CI = 24.47$ ). These findings convey four messages: (1) DPC facilitated the prediction of  
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13 EPC on OCB ( $\beta_{diff} = .19, \Delta R^2_{diff} = .80$ ); (2) EPC and DPC had different beta figures, one was  
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15 positive and one negative, indicating that EPC and DPC predicted OCB in opposite way; (3) When  
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17 the valence of beta ( $\beta$ ) was removed (i.e., no positive or negative signs), EPC had a higher  
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19 predicting strength (i.e., stronger predictor) than DPC over OCB; (4) It is very likely that the bigger  
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21 the difference between expectation and perceived reality the lower the OCB. Hence, Hypothesis 4  
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23 was supported.  
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### 33 34 35 36 37 *Study 2 - Research Design and Subject*

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39 Following the same research protocols as Study 1 we contacted all the primary schools (105) in  
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41 Central Taiwan. Of these, 30 schools responded and agreed to participate in the research. This  
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43 spatial variation was to help counter the effect that drawing PSTs from similar districts may have  
44  
45 had on the data. We used the same sampling technique and questionnaire survey procedure as in  
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47 Study 1. The survey was conducted from October 2011-February 2012. Of 550 questionnaires  
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49 distributed, 500 were returned, of which 488 were useable, giving an 88.72% response rate.  
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2 Overall, 74.18% of PSTs were female. By age they were: 30 years old or younger (2.05%), 31 to 40  
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4 years old (13.52%), 41 to 50 years old (40.98%), and 51 years old and older (42.62%). By work  
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6 service they were: 2 or less years (4.10%), 3-10 years (32.79%), 11-20 years (45.29%), and 21 years  
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8 and more (17.00%).  
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17 We acknowledge the different categories between Study 1 and 2 samples by service age and missing  
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19 details on graduates. However, these demographics were designed by the schools and were  
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21 embedded within their annual appraisal questionnaire, thus we were unable to change them.  
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### 28 *Measurement*

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30 We adopted a cross-sectional approach to measure all variables, with an anti-CMV strategy  
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32 (Gautam, Dick, and Wagner, 2004; Glomb *et al.*, 2011; Lu *et al.*, 2010; Ten Brummelhuis and Van  
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34 Der Lippe, 2010). We used two standardized scales, as follows.  
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40 *OCB* was measured by Hsieh *et al.*'s (2010) scale, including three subscales. These were: *assisting*  
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42 *colleagues* (7 items;  $\alpha = .90$ ), *job commitment & working morale* (6 items;  $\alpha = .81$ ) and *non-selfish*  
43  
44 *behavior* (8 items;  $\alpha = .87$ ). The composite internal consistency of three subscales was satisfactory  
45  
46 (21 items;  $\alpha = .94$ ). Sample items from each subscale included: “*I am keen to share my work*  
47  
48 *experiences with my colleagues in need*”, “*At school I tend to complete the tasks ahead of*  
49  
50 *schedule,*” and “*At school I do not deal with personal business using school resources.*” Responses  
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58 used a 5-point Likert scale (1 = completely disagree, 5 = completely agree). Higher scores meant  
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3 higher levels of OCB, indicating that participants demonstrated more OCB at their schools.  
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9 Principals' LF was measured by Bolman and Deal's (1990) scale of four specific frames: LF1 was  
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11 the structural frame (8 items;  $\alpha = .92$ ), LF2 was the HR frame (8 items;  $\alpha = .80$ ), LF3 was the  
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13 political frame (8 items;  $\alpha = .93$ ); LF4 was the symbolic frame (8 items;  $\alpha = .90$ ). All questions  
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15 were preceded by: "My principal (or head teachers)..." Sample items were: "sets specific,  
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17 measurable goals and holds people accountable for results" (structural); "shows high sensitivity  
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19 and concern for others' needs and feelings" (HR); "succeeds in the face of conflict and opposition"  
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21 (political), and; "serves as an influential model of organizational aspirations and values"  
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23 (symbolic). Responses used a 5-point Likert scale (1 = completely disagree, 5 = completely agree).  
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32 Higher scores meant higher levels of agreement, indicating that principals were observed to display  
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34 a specific LF at school.  
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#### 40 *Back Translation Procedure*

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43 Bolman and Deal's (1990) scale was originally developed and validated in English, so we translated  
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45 all items into traditional Chinese for the survey, with a back-translation procedure to ensure language  
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47 equivalence and appropriateness. Two experts also examined the validity and clarity of scale items.  
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52 We made revisions accordingly.  
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#### 58 *Findings*

We present inter-correlations ( $r$ ), means ( $M$ ), standard deviations ( $SD$ ), and reliability ( $\alpha$ ) of all variables in Table 3. These statistics show a number of significant correlations between variables, providing a sound foundation for further examination of the research hypotheses.

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INSERT TABLE 3 ABOUT HERE  
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*Hypothesis 5.* As Table 3 indicates, OCB was associated with *Structural frame* ( $r = .37, p < .001$ ), *HR frame* ( $r = .36, p < .001$ ), *Political frame* ( $r = .34, p < .001$ ), and *Symbolic frame* ( $r = .40, p < .001$ ). All correlation coefficients ( $r$ ) were significantly positive, indicating that, when OCB changed, these LF changed in the same direction, and vice versa. When all four LF were put together and analyzed as one, it was also positively correlated with OCB ( $r = .40, p < .001$ ). Hence, Hypothesis 5 was supported.

*Hypothesis 6.* We conducted a hierarchical regression analysis, with three steps embedded. The dependent variable was OCB and the independent variables (predictors) were the four different LF: (1) Structural; (2) HR; (3) Political; (4) Symbolic. In Step 1 we entered these four LF as predictors (each frame stands alone). In Step 2, we entered the interactions between two LF (2-way interaction) as predictors. In the final step, we entered the interactions between three LF (3-way interaction) as predictors. Results are seen in Table 4.

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INSERT TABLE 4 ABOUT HERE  
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3 In Step 1, when four LF were entered into the regression equation, only the symbolic frame  
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5 significantly predicted OCB ( $\beta = .27, p < .001$ ). In Step 2, when six different interactions (2-way  
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7 interaction) were entered into the regression equation, only the interaction between symbolic frame  
8  
9 and structural frame significantly predicted OCB ( $\beta = 1.69, p < .05$ ). In Step 3, when four different  
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11 interactions (3-way interaction) were entered into the regression equation, none of the variables  
12  
13 significantly predicted OCB. From Steps 1 to 3, only the symbolic frame and one 2-way interaction  
14  
15 significantly predicted OCB. Moreover, the regression coefficients of symbolic frame (as a  
16  
17 predictor to OCB) reduced from .27 (Step 1), -1.44 (Step 2) to -2.00 (Step 3). The variance of  
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19 adjusted *R* square has also shown a reduction pattern from Step 1 ( $\Delta R^2 = .17, p < .001$ ), Step 2 ( $\Delta R^2$   
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21 = .02,  $p < .05$ ) to Step 3 ( $\Delta R^2 = .01, n.s.$ ). In summary, these findings provided ample evidence in  
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23 support of Hypothesis 6 that different LF influence each other in predicting OCB.  
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### 37 Discussion

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39 We examined OCB-related factors at work using both personal (individual) and organizational  
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41 perspectives. In Study 1 we analyzed PST's composite OCB via Identity and PC theories. In Study 2  
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43 we adopted LMX and LF theories to scrutinize different aspects of OCB: assisting colleagues, job  
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45 commitment, working morale and non-selfish behavior. Overall, the studies have increased our  
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47 understanding of PST's OCB and the findings reveal important implications for both school  
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49 principals and HR managers and with wider application to management in other public/third sector  
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51 organizations. We discuss these findings next.  
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### *Theoretical contributions*

Our literature review suggests that PST's OCB is associated with OID (Bommer *et al.*, 2003; Chang *et al.*, 2011), PC (George, 2009; Meckler *et al.*, 2003), and principal's LF (Bolman and Deal, 1997; Cheng, 2004). We further examined these associations. Our findings are rich and informative in several ways. First, Study 1 found that OID is positively correlated with OCB and that OID is important to the occurrence of OCB within primary schools. When PSTs report higher levels of OID they are more likely to demonstrate OCB. Such an OID-OCB relationship could be an artifact of a cross-sectional design and not a true causality relationship. To guard against this potential criticism we conducted further moderation analyses. We observed a dovetail effect, whereby the findings from previous analyses and our study concur, supporting the suggestion that OID is an antecedent of OCB in primary schools. Thus, our study identifies OID as an important antecedent of OCB and extends current understanding of organizational Identity (e.g., Patchen, 1970) and Person-Organizational Fit theories (Chatman, 1989; Spector, 2006) to the PST context.

Second, EPC is found to moderate the OID-OCB relationship, indicating that PSTs with higher levels of EPC are more likely to demonstrate OCB at school. Interestingly, PPC did not demonstrate such a moderating effect and DPC (the difference between EPC and PPC) is negatively correlated with OCB. This is a surprising finding as both Social Exchange (e.g., Blau, 1964) and PC theories suggest that increased PC (PPC and EPC) are important elements to OCB (e.g., Lin and Chen,

2006). Our findings can be explained by two possible reasons. First, expectation, rather than perceived reality, is the better predictor of OCB and remains a better predictor even when the difference between the two is taken into account. Second, expectation dominates decision making in OCB. This is because that a breach of the PC impairs the employees' experience and thus reduces levels of OCB (Chen *et al.*, 2008; George, 2009). Although we acknowledge that the two reasons are hypothetical in nature and recommend further examination, our study thus reveal new associations between EPC, PPC, (and DPC) with OCB, so extending Social Exchange and PC theories.

Third, Study 1 found that both EPC and DPC are antecedents of OCB and that EPC moderates the OCB relationship. These findings are important when considered in conjunction with LF. Study 2 found that the most useful LF for predicting all aspects of OCB was the symbolic frame. Thus, we demonstrate new relationships between EPC, DPC, OCB, and LF in a comprehensive framework, signifying the important concept of PSTs OCB. We support existing knowledge about the antecedents of OCB and broaden LMX theory (Deluga, 1998) by linking both LMX and OCB theories.

Fourth, we demonstrated that across different LFs, only the symbolic frame was a valid predictor for all aspects of OCB. This finding suggests that indeed certain leadership styles are more favored than others, particularly in the context of PSTs. This finding is in contrast to Thompson's (2000)

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3 multi-balanced view of LF and as such supports our prediction about the OCB differences between  
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5 business and PST samples.  
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### 10 11 *Managerial implications* 12

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14 There are several implications for management practice, in not only primary schools but also in  
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16 education more generally and other service sectors. Study 1 found that the PC (e.g., EPC, DPC) is  
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18 important to the occurrence of OCB. Thus, we suggest that school principals and HR managers  
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20 should consider this factor during recruitment. The rationale is that if the applicants have higher  
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22 expectations of the school and job duties but then realize once they start their jobs that reality is  
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24 different from expectations, they are more likely to have higher levels of DPC. Consequently, they  
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26 are less likely to demonstrate OCB.  
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37 Second, we found that OID plays a crucial role in facilitating OCB. We suggest that, in the first  
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39 instance, school principals and HR managers should look at the PC and their own LF. Study 2  
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41 further found that the PC (especially EPC) moderated the OID-OCB relationship and that  
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43 principals' own LF (in particular the symbolic frame) was highly relevant to the production of OCB.  
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46 More specifically, Study 2 found that using multi-LFs did not necessarily promote OCB; rather,  
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48 using a single LF (i.e., the symbolic frame) was more likely to promote OCB. This finding is  
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50 counter to previous research (Bolman and Deal, 1997), caused perhaps by our context. However, we  
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52 recognize the importance of reporting the impact of LF on OCB. Hence, we reveal that EPC and the  
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2 use of a symbolic frame emerge as major factors in the production of OCB. The symbolic frame is  
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5 characterized by charisma, inspiration, creativity and loyalty. We posit that these ideals are those,  
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8 which are most influential. If the school strives to meet shared expectations (via symbolic  
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10 leadership), the PST is more prepared to accept that there is a discrepancy between expectation and  
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12 reality. This finding is clearly open to other competing explanations and is worthy of further  
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15 investigation.  
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### 23 **Limitations and future research directions**

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25 Limitations stem from our single focus sector (Shapiro, Von Glinow, and Xiao, 2007) and  
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28 timeframe. In both our studies we employed questionnaire surveys and irrespective of the spatial  
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30 and temporal difference in terms of their execution and different populations from which they were  
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32 drawn, the restrictions of such approach should be kept in mind when interpreting the results  
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35 (Cascio, 2012). Indeed, some may see cross-sectional studies as a concern, although we recognized  
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37 issues and possible CMV bias from the start. Furthermore, we note that our approach is not  
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39 uncommon and studies using a similar approach (e.g., Lu *et al.*, 2010; Ten Brummelhuis and Van  
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42 Der Lippe, 2010) continue to be undertaken and published.  
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52 We conducted two studies separately, but it might have been better if both could be carried out  
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54 simultaneously, so OCB and its relevance to other variables could be integrated and analyzed  
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57 (Bartunek and Rynes, 2010). Another limitation is that we only used incumbent PSTs and excluded  
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2 non-academic staff. This is important because it fails to fully appreciate the entire employment  
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4 context. Moreover, the PC is about the relationship between the employee and employer, yet we  
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6 only examined employee perceptions. In addition, we acknowledge some limitations to the  
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8 procedure of calculating different scores in the EPC and PPC discrepancy measure, as mentioned by  
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10 Edward (2001) and Edwards (2001). Kotz et al. (2008) proposes a method of calculating alpha  
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12 score for difference scores, which future studies may use. Another limitation is that we did not  
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14 measure OCB role definition, i.e., to what extent the PSTs perceived OCB as the part of their in-role  
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16 behavior than extra-role behaviors. Therefore, it may be difficult to infer that the PSTs perceived  
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18 OCB truly as extra-role behavior. For further reading on OCB role definition, please refer the work  
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20 of (Chiaburu, and Byrne 2009, Quratulain, 2010). Finally, we examined OCB as a general construct  
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22 so the different forms of OCB were not examined separately. In future studies we propose that  
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24 researchers can investigate OCB separately, such that: (1) OCB altruism is measured separately  
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26 from OCB compliance; (2) Collective OCB is measured separately from Individual OCB. We hope  
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28 that scholars may wish to investigate these interesting OCB issues for their future projects. This  
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30 would ensure the generalizability and refinement of our framework, and we encourage further  
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32 studies to confirm our findings.  
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## 52 Conclusion

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54 OCB research has been dominated by samples drawn from only certain business sectors, corporate  
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56 organizations, and higher education. Little attention has been given to OCB within the primary  
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2 school context, despite the common belief that OCB is considered fundamental to school success  
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5 (e.g. Chang *et al.*, 2011) and can have wider applicability within education and beyond to other  
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8 service sectors. Thus, to fill this important research gap we researched PST's OCB. We made three  
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11 contributions to OCB theory and research. First, Study 1 analyzed the relationships between OCB,  
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14 OID, and PC while Study 2 analyzed the potential association between OCB and different LFs. The  
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17 common theme and thread between the studies was OCB, although Study 1 adopted a more  
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20 individual approach (hence focused on the PC and identification) and Study 2 adopted a more  
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23 managerial and organizational approach (hence focused on LF).

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29 Second, we examined the OCB-related factors at work using both personal and organizational  
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32 perspectives. To our knowledge this is the first study to analyze PST's OCB using both individual  
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35 and organizational approaches. Theories of Organizational Justice and Social Exchange are more  
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38 group/organizationally based, whereas theories of Person-Organization Fit are more personally  
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41 based. Our research has clarified the behavioral mechanisms of OCB by marring two heterogeneous  
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44 perspectives, hence contributing to our knowledge of OCB and perhaps even its management.

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48 Third, our findings from Taiwan provide important implications for a little researched context.

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52 Taiwan along with other countries, such as Japan, currently face challenges with an ultra-low

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55 birthrate, which in time will affect the primary schools' existence, as many of them will face cuts in

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58 government funding. Consequently, our study has enlightened a critical approach in developing

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3 OCB further in a very specific context, further aiding school policies. The findings, however, not  
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6 only have implications for OCB in education, but also in other cultures like Taiwan, with similar  
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9 traits, norms and values rooted in Buddhism. We hope that more studies will use our study as a  
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12 platform to study OCB in both different contexts and across different cultures.

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**Table 1.** Descriptive statistics and zero-order correlations among research variables (Study 1)

	M	SD	$\alpha$	1	2	3	4
1. Organizational Identification (OID)	3.64	.57	.94				
2. Expected psychological contract (EPC)	4.45	.49	.87	.18**			
3. Perceived psychological contract (PPC)	3.61	.62	.84	.60***	.14**		
4. EPC-PPC Difference (DPC)	0.84	.74	N/A†	-.39**	.55***	-.75***	
5. General OCB at primary school (OCB)	4.05	.41	.94	.55***	.40**	.34**	-.02

Note. †. DPC is a newly created variable for analytic purpose only (i.e., DPC = EPC-PPC) and hence no alpha value is available.

(\*\*\*.  $p < .05$ ; \*\*.  $p < .01$ ; \*.  $p < .05$ ).

**Table 2.** Summary of Hierarchical Regression Analyses (Study 1)

Predictors†	Organizational Citizenship Behavior (OCB)		
	Model 1	Model 2	Model 3
Step 1: Antecedent variable (IV)			
Organizational Identification (OID)	.55†***	.50***	-1.39***
Step 2: Potential moderator			
Expected Psychological Contract (EPC)		.31**	.01
Step 3: Interaction (moderating effect)			
OID x EPC			2.10***
$\Delta R^2$ , each step	.31**	.09*	.56***
Total $R^2$	.31**	.40**	.96***
$F$ values	241.07***	182.00***	4.38***

Note. †. Standardized regression coefficients ( $\beta$ ) are shown in each equation.  $N = 549$ .

(\*\*\*.  $p < .05$ ; \*\*.  $p < .01$ ; \*.  $p < .05$ ).

**Table 3.** Descriptive statistics and zero-order correlations among research variables (Study 2)

	M	SD	$\alpha$	1	2	3	4	5
1. Organizational citizenship behavior	4.10	.42	.94					
2. LF1 (Structural frame)	4.03	.66	.92	.37***				
3. LF2 (HR frame)	4.12	.66	.80	.36***	.74***			
4. LF3 (Political frame)	3.97	.69	.93	.34***	.82***	.72***		
5. LF4 (Symbolic frame)	4.08	.63	.90	.40**	.80***	.75***	.81***	
6. Composite LF (all frames)	4.04	.61	.96	.40***	.93***	.83***	.94***	.93***

Note. \*\*\*.  $p < .05$ ; \*\*.  $p < .01$ ; \*.  $p < .05$ .

**Table 4.** Summary of Hierarchical Regression Analyses (Study 2)

Predictors†	Organizational Citizenship Behavior (OCB)		
	Model 1	Model 2	Model 3
Step 1: Independent variables			
LF1 (Structural frame)	.13†	-.40	-.86
LF2 (HR frame)	.11	.66	.62
LF3 (Political frame)	-.06	.51	-.12
LF4 (Symbolic frame)	.27***	-1.45*	-2.00*
Step 2: Interaction (2-way)			
LF1 x LF2		-.86	-.87
LF1 x LF3		.23	1.34
LF1 x LF4		1.69*	2.71*
LF2 x LF3		-1.68	-1.63
LF2 x LF4		1.33	1.37
LF3 x LF4		-.38	1.63
Step 3: Interaction (3-way)			
LF1 x LF2 x LF3			-4.29
LF1 x LF3 x LF4			1.84
LF2 x LF3 x LF4			-3.50
LF2 x LF1 x LF4			-2.64
$\Delta R^2$ , each step	.17***	.02*	.01
Total $R^2$	.17***	.18***	.19***
$F$ values	24.82***	12.12***	11.07***

Note. †. Standardized regression coefficients ( $\beta$ ) are shown in each equation.  $N = 484$ .

(\*\*\*.  $p < .05$ ; \*\*.  $p < .01$ ; \*.  $p < .05$ ).

## Covering Letter

Ms. Ref.: APJBA-01-2016-0010

**“Organizational Citizenship Behavior, Identification, Psychological Contract and Leadership Frames: The Example of Primary School Teachers in Taiwan”**

Asia-Pacific Journal of Business Administration

We are grateful for the reviewer’s constructive suggestions, assisting us in improving our manuscript. In our manuscript, we highlight the changes we made in yellow. Next, we number and address each point raised by the reviewers sequentially.

Reviewer comments	Author response
The author(s) need to consider the Taiwanese cultural context in outlining the discretionary domain of the 'school teachers and the school principal'. The variables investigated may have unique contextual influence which needs to be clarified and adjustments made. If the author(s) decide not to include the cultural context, a cogent explanation for such an approach needs to be presented.	Thank you for this valuable comment. To address this comment, we now included more details about the cultural context of Taiwan. For example, in the introduction, we note that:  “Using the context of Taiwan, the study further contributes to literature with a perspective from a little researched context. Taiwan is currently facing great challenges with an ultra-low birthrate, which suggests that in the next decades, the primary school population will fall significantly. Hence, the study of OCB in primary schools and the implications from such approach may assist in the development of a sustainable competitive advantage and long-term survival of the school.”
The paper contains original research material of considerable significance to the discipline.	Thank you.
The paper does not include adequate understanding of the literature from the context where the empirical investigation for this research paper was undertaken.	Thank you for highlighting this point. We now included a few studies in the present context, however, in general these remain sparse and thus, one of the contributions of this study. In particular, we adopted Organizational Justice Theory, Social Exchange Theory and Person-Organizational Fit Theory to evaluate the formation of OCB and to analyze whether these theories are applicable to the primary school context (hence contributing to the understanding of OCB theories).
The author(s) employ a very interesting methodology. However, there is a need for more explanation, in terms of its contextual relevance.	Thank you. We now included some more details about the Taiwanese context in the method section. Specifically, we note in the research context section that:  “The chosen context of primary schools in Taiwan is of interest to our study for several reasons: (1) Taiwan faces severe challenges with a decreasing birthrate, considered one of the world’s lowest birthrates (The Conversation,

	<p>2016), which ultimately affects the existence of primary schools; hence OCB may pose an important approach to adding value and differentiation. (2) Primary schools exist for the purpose of educating the young and contribute towards society as a whole, thus very different than the business context, where most of the OCB research takes place. (3) The collectivistic culture of Taiwan is clearly different from Western culture, with for example, higher inequality between people in terms of power distribution and a lower score on individualism than those in developed countries (Hofstede, 1984); thus the findings from Taiwan can be a model for other newly emerging economies. The values and norms of Taiwanese employees have strong roots in Buddhism and Taoism, yielding another interesting aspect to the study of OCB.”</p>
<p>The results of the study have not been presented with sufficient clarity and relevance to appropriate contexts. The conclusion needs to emphasise the Taiwanese contexts much more succinctly.</p>	<p>Thank you for emphasizing this point, which we have now addressed by including more about the Taiwanese context throughout the paper, as noted above. Accordingly, in the conclusion, we now added the following:</p> <p>“Third, our findings from Taiwan provide important implications for a little researched context. Taiwan along with other countries, such as Japan, currently face challenges with an ultra-low birthrate, which in time will affect the primary schools’ existence, as many of them will face cuts in government funding. Consequently, our study enlightens a critical approach in developing OCB further in a very specific context, further aiding school policies. The findings, however, not only have implications for OCB in education, but also in other cultures like Taiwan, with similar traits, norms and values rooted in Buddhism.”</p>
<p>Though the research espouses a very significant promise of bridging the gap between theory and practice, it has not been convincingly presented. This is because the generalizability of this empirical work is not evident.</p>	<p>Thank you for raising this issue. Our study has implications for primary schools and other education institutions as well as the greater HRM practice, although generalization is always difficult. We now highlighted the general implications arising from our study. Specifically, we note for future studies that:</p> <p>“We hope that scholars may wish to investigate these interesting OCB issues for their future projects. This would ensure the generalizability and refinement of our framework, and we encourage further studies to confirm our findings.”</p>

	“We hope that more studies will use our study as a platform to study OCB in both different contexts and across different cultures.”
Though the paper is generally well constructed, there needs to be some amendment, in terms of the structure and technical protocols. Details of this are enumerated in the attached Reviewer Feedback document.	Thank you for this comment, which we have now taken into consideration for our revised version.

Based on the reviewer’s insightful comments, the paper has greatly improved. Thank you.

For Peer Review