Distributed leadership and teachers’ affective commitment to change in Malaysian primary schools: the contextual influence of gender and teaching experience

Lei Mee Thien & Donnie Adams

To cite this article: Lei Mee Thien & Donnie Adams (2021) Distributed leadership and teachers’ affective commitment to change in Malaysian primary schools: the contextual influence of gender and teaching experience, Educational Studies, 47:2, 179-199, DOI: 10.1080/03055698.2019.1680349

To link to this article: https://doi.org/10.1080/03055698.2019.1680349

Published online: 21 Oct 2019.

Article views: 322

View related articles

View Crossmark data

Citing articles: 1 View citing articles
Distributed leadership and teachers’ affective commitment to change in Malaysian primary schools: the contextual influence of gender and teaching experience

Lei Mee Thien and Donnie Adams

ABSTRACT
Leadership is no longer centred on a singular person, but task sharing through collective interactions of multiple leaders. However, previous studies have mainly focused on the effect of an individual leader on teachers’ affective commitment to change. This study investigates the contextual influence of gender and teaching experience on the relationships between distributed leadership functions and teachers’ affective commitment to change. Data were gathered from a sample of 531 teachers selected randomly from 30 Malaysian primary schools. Data were analysed using partial least squares structural equation modelling. Findings indicated significant positive effects of leadership support, leadership supervision, cohesive team leadership, and participative decision-making on affective commitment to change. Influence of leadership supervision on affective commitment to change was stronger for female teachers compared to male teachers. Leadership supervision and participative decision-making were positively related to affective commitment to change for early-career teachers. Implications and suggestions for future studies are presented.

ARTICLE HISTORY
Received 4 June 2019
Accepted 3 October 2019

KEYWORDS
Affective commitment to change; cohesive leadership team; distributed leadership; leadership supervision; participative decision-making

Introduction
Teachers are key personnel and change agents for any successful education reform. Therefore, it is imperative to identify the determinants or predictors of teachers’ commitment (Hulpia, Devos, and Van Keer 2011). In this respect, evidence suggests that school leadership influence on teachers’ affective commitment plays an important role in organisational effectiveness (Dee, Henkin, and Singleton 2006) to fulfil educational change initiatives (Achua and Lussier 2013; Tingle, Corrales, and Peters 2019).

However, previous studies have mainly adopted a heroic-leadership approach in which the effect of an individual leader on teachers’ affective commitment to change was investigated (Heck and Hallinger 2009; Hulpia, Devos, and Rosseel 2009a). For example, transformational leaders effectively engaged teachers in change initiatives and assisted them to adapt to the current needs of the teaching profession in a Hong Kong primary
school context (e.g., Liu 2015). School leaders can no longer lead the school individually, particularly in a large school (Hulpia, Devos, and Rosseel 2009a; Spillane 2012; Shen et al. 2019), and such heroic leadership is no longer sufficient (Harris 2004; Ng, 2017); paving the way for emerging distributed leadership models (Bush and Glover 2014; Gronn 2002).

Distributed leadership is operationalised as the extent to which leadership functions are distributed among formal and informal leadership positions in the leadership team, including principal, assistant principals, and teacher leaders (Hulpia, Devos, and Rosseel 2009a). The formal distribution of leadership functions encompasses leadership support, leadership supervision, and team leadership, whereas the informal form of distribution leadership function includes participative decision-making (Gronn 2002; Hulpia, Devos, and Van Keer 2009b; Spillane 2012).

Leadership is no longer centred on a singular person, but task sharing through collective interactions of multiple leaders (Tian, Risku, and Collin 2016; Thien 2019). This implies that school leaders need to distribute their leadership functions to members of the leadership team and work closely with these individuals (Hulpia, Devos, and Van Keer 2011), with teachers also involved in the leadership of the school (Harris 2008). However, questions remain if these teachers do really feel a greater sense of ownership, which leads to increase commitment (Spillane and Kim 2012; Stoelinga and Mangin 2010).

It is worthy to highlight that previous empirical findings found female teachers as more committed compared to male teachers (e.g., Reyes, 1992; Singh and Billingsley 1998) whereas no significant difference was found in teacher commitment between male and female teachers by Dee, Henkin, and Singleton (2006) as well as Fresko, Kfir, and Nasser (1997). Therefore, the contextual influence of gender needs further investigation due to the increasing number of women leaders in education (Adams 2018). Lord, De Vader and Alliger (1986) argue that masculinity-femininity is an important personality trait in forming leadership perceptions. In fact, female leaders tend to engage in interpersonal behaviours, and nurture close relationships with others, thus contributing to employees’ feelings of belongingness (Kacmar et al. 2011). Meanwhile, male leaders generally have a competitive and achievement-oriented behaviour (Oritz, 2018).

On the other hand, literature revealed that teaching experience is an important predictor of teachers’ affective commitment to change (see Hulpia, Devos, and Rosseel 2009a; Hulpia, Devos, and Van Keer 2009b). Studies found that teachers with longer tenure are more likely to commit to the same profession because of the time and effort invested in developing their teaching skills and the anticipated costs associated with changing careers (Chan et al. 2008). In contrast, other studies have not found a significant relationship between seniority in teaching experience and organisational commitment (Dee, Henkin, and Singleton 2006). Due to these inconsistent findings, the present study aims to examine the contextual influence of gender and teaching experience on the relationship between distributed leadership functions and teachers’ affective commitment to change in the Malaysian primary school context. The research focuses on primary schools due to previous researches on school leadership and teachers’ affective commitment to change were centred on secondary schools (e.g., Hulpia and Devos 2009; Hulpia, Devos, and Rosseel 2009a; Hulpia, Devos, and Van Keer 2011; Hulpia et al. 2012; Liu 2016).

This study contributes to the existing literature on teacher commitment to change by providing empirical evidence leading to new knowledge and a better understanding of the relationships between distributed leadership functions and teachers’ commitment to
change with the contextual influence of gender and teaching experience. Moreover, the study has value added via its contextual originality being the first study that is empirically conducted in the Malaysian primary school context. Thus, it contributes to the scarce body of literature on both teachers’ affective commitment to change and distributed leadership functions, generally in the Asian region.

This paper is organised into four sections. First, we outline the theoretical framework by expounding teachers’ affective commitment to change and the conceptualisation of distributed leadership functions. We then discuss distributed leadership, gender, and teaching experience as antecedents of teachers’ affective commitment to change. Next, methods and empirical results are presented, followed by discussion of the results, implications, limitations, and suggestions for future studies.

Theoretical perspective and hypothesis development

Commitment to change

Commitment to change is commonly described as employees’ level of attachment to the organisations’ implementation of dynamic processes, such as new work rules, policies, programmes, budgets, and technology (Neubert and Wu 2009). Deriving from Mowday, Steers, and Porter (1979), (1982)) original conceptualisation of organisational commitment, Herscovitch and Meyer (2002) conceptualised commitment to change as a multidimensional construct that consists of three dimensions: (1) affective commitment to change, (2) continuance commitment to change, and (3) normative commitment to change.

According to Herscovitch and Meyer (2002), affective commitment to change refers to a desire to provide support for a specific change being introduced in the workplace (feeling-based). Continuance commitment to change refers to recognition that there are costs associated with failure to provide support for the change (cost-based). Meanwhile, normative commitment to change refers to a sense of obligation to provide support for the change (obligation-based). In particular, affective commitment to change has become an important core value that organisations need to develop among their employees (Ritz et al. 2012; Rogiest, Segers, and van Witteloostuijn 2015). In this study, we focus on affective commitment to change due to its positive influence on organisational changes (Michaelis, Stegmaier, and Sonntag 2010).

Based on the conceptualisation of affective commitment to change by Herscovitch and Meyer (2002), teachers’ affective commitment to change can be described by stating that teachers choose to stay with the school due to their emotional attachment to the school. Teachers with high level of affective commitment to change are expected to successfully cope with organisational changes although the changes may be stressful for them, which emphasises the need to identify the contributory factors in this outcome.

In the following part, we first provide an overview of distributed leadership in general. Next, we focus on the operationalisation of distributed leadership. This operationalisation is needed to investigate the relationships between the distributed leadership dimensions and teachers’ affective commitment to change.
**Distributed leadership**

Since the mid-1990s, distributed leadership has been discussed extensively in educational leadership (Bush 2013; Gronn 2002; Harris 2007). The effects of school leadership have largely been examined on a single person, namely the school principal. A traditional leadership perspective focused mostly on quality rather than who performed the leadership functions (Hulpia, Devos, and Van Keer 2011). However, the concept of distributed leadership has gained significant interest recently due to the shift of perspective from principal as a sole person who performs these functions, to members of the school leadership team that are involved in supporting and supervising teachers as well (Bush 2013; Harris 2007).

Leadership is no longer a solo effort but rather a collective decision-making process, an interaction between principal and teachers (Bush 2013), and creating the conditions for other leaders to emerge (Harris 2011). Schools with a singular power and a top-down hierarchy often lead to low morale and poor performance (Oswald and Engelbrecht 2013). The roles of the principal now remain pivotal but in different ways. Harris (2004) stated the most recent literature on change and school improvement suggests that the form of leadership most often identified with improved learning outcomes is one that is distributed or shared. The effects and evidence of distributed leadership have only recently emerged with reforms such as stakeholders’ involvement in school decision-making processes (Devos, Tuytens, and Hulpia 2014; Spillane 2012) and utilisation of teacher experts to improve their schools (Ross, Lutfi, and Hope 2016).

However, there are still sceptics on the concept of distributed leadership in Malaysia, especially in the current traditional hierarchies of leadership in schools. Renegotiation of roles can lead to conflict and confusion among teachers on who should make the final decision (Hulpia, Devos, and Van Keer 2011; Neuman and Simmons 2000). Power and authority must remain at the top and this form of hierarchical structure is vital for accountability (Perera, Adams, and Muniandy 2015). To conclude, although distributed leadership is strongly related to better outcomes, it is still characterised by ambiguity and conflicting findings (Hulpia, Devos, and Van Keer 2011).

**Conceptualisation of distributed leadership**

Bennett, Harvey, Wise, and Woods’ (2003) review of the conceptualisation of distributed leadership pointed out an absence of an explicit and commonly accepted definition, which thus constituted the focus of future research. Therefore, it is necessary to conceptualise distributed leadership to examine its effect on teachers’ affective commitment to change.

Derived from a combination of transformational and instructional leadership models (Bass 1985; Hallinger and Murphy 1985; Hulpia, Devos, and Rosseel 2009a), four core dimensions of successful distributed leaders are distinguished: (a) leadership support, where leaders foster and set clear goals and a collective school vision, motivate teachers, and encourage teachers’ professional learning; (b) leadership supervision, which concerns the principal’s role in formally monitoring teachers in schools; (c) cohesive leadership team, where the focus is on the concerted action of distributed leadership; and (d) participative decision-making, in which all stakeholders such as administrators, teachers, students, and parents are involved.
**Distributed leadership as an antecedent of affective commitment to change**

Bennett et al.’s (2003) review of distributed leadership research from 1996 to 2002 indicated a research gap in the practices and effects of distributed leadership due to the lack of empirical evidence. Empirical evidence concerning the effects of distributed leadership has only recently begun to emerge (e.g., Heck and Hallinger 2009; Leithwood, Patten, and Jantzi 2010; Tian, Risku, and Collin 2016; Thien 2019) forming one of the most heated arguments about its effect on enhancing students’ learning outcomes (Tian, Risku, and Collin 2016).

Attempts to validate distributed leadership and students’ learning outcomes appeared extremely arduous. Anderson, Moore, and Sun’s (2012) study failed to find direct correlations. Another attempt by Heck and Hallinger (2010) proved an indirect but significant relationship. Distributed leadership subscribes to different sociocultural contexts in different ways, thus providing diverse results (Harris, Jones, and Adams 2016). Anderson et al. (2012) recommended that most empirical studies should focus on the effects of distributed leadership on teachers rather than its effects on students’ learning outcomes.

However, empirical evidences concerning the effects of distributed leadership dimensions and teachers’ affective commitment to change are scarce. A Canadian study by Bush and Glover (2012) indicated that principal’s support strongly influenced the effectiveness of distributed leadership as they were the “gatekeepers” to facilitate and support leadership from others. Scholars have stressed that leadership support could foster a collective school vision and stimulate teachers’ affective commitment to change (Devos, Tuytens, and Hulpia 2014; Tian, Risku, and Collin 2016; Veeriah, Chua, and Siaw 2017). Principals’ leadership support includes several important leadership practices such as developing a shared school vision and goals, which are important to initiate a committed teaching force (Nguni, Sleeers, and Denessen 2006). Several studies have indicated that principal’s instructional feedback (Robinson, Lloyd, and Rowe 2008) and encouragement improves teachers’ commitment (Louis 1998). Hence, schools with strong leadership support are associated with higher levels of commitment among teachers.

On the other hand, the literature on leadership supervision is less unanimous. Leadership supervision emphasises the role of school leaders to direct, control, and monitor teachers’ instructional processes and thus is associated with teacher commitment (Hallinger and Murphy 1985; Hulpia and Devos 2010; Somech 2005). Robinson, Lloyd, and Rowe (2008) claimed teachers welcomed classroom observation and teacher evaluation as leaders provide useful feedback that helps maintain their commitment. A study in Belgium revealed leaving teacher teams to work alone without regular supervision leads to low commitment (Hulpia et al. 2012). Other studies found leadership supervision distributed across multiple leaders showed a significant negative effect on teacher commitment (Devos, Tuytens, and Hulpia 2014; Hulpia, Devos, and Van Keer 2009b, 2011).

Cohesive leadership team pertains to the openness, mutual trust, and open communication among leaders with teachers (Holtz 2004; Kozlowski and Ilgen 2006). Studies in Belgian secondary schools found distributed leadership significantly enhanced teachers’ affective commitment to change when there was cohesion in the leadership team (Hulpia and Devos 2009; Hulpia, Devos, and Rosseel 2009a). Teachers are committed if they believe their school is led by a leadership team centred on goal orientedness, group cohesion, and clear roles (Hulpia, Devos, and Van Keer 2009b, 2011).
Distributed leadership involves all teachers leading the school in a collaborative decision-making process (Heck and Hallinger 2010). However, several scholars argue if teachers who participate in decision-making do really feel a greater sense of ownership, which leads to increased commitment (Spillane and Kim 2012; Stoelinga and Mangin 2010). Previous studies have found that principals who promote a trust and collaborative climate with the establishment of certain structures and processes in schools also promote the participative decision-making of teachers in school decisions (Devos, Tuytens, and Hulpia 2014; Silins and Mulford 2004). Participative decision-making provides opportunity for teachers to be involved in the decision-making process, which can promote teachers’ sense of ownership and their commitment to schools (Devos, Tuytens, and Hulpia 2014; Somech 2005). A study in Hong Kong by Law, Galton, and Wan (2010) found teachers to be more committed when they are involved in the decision-making process.

Based on previous studies, the following four hypotheses about the dimensions of distributed leadership and teachers’ affective commitment to change were advanced.

\[ H1: \] Leadership support is positively related to teachers’ affective commitment to change.

\[ H2: \] Leadership supervision is positively related to teachers’ affective commitment to change.

\[ H3: \] Cohesive leadership team is positively related to teachers’ affective commitment to change.

\[ H4: \] Participative decision-making is positively related to teachers’ affective commitment to change.

**Contextual variables and affective commitment to change**

Literature on the contextual influence of gender and teaching experience on the relationship between distributed leadership and teacher commitment to change remains limited and inconsistent. Previous research shows that males and females differ in their level of commitment to the organisation. Females are more committed than their male counterparts (see Mathieu and Zajac 1990; Singh and Billingsley 1998). Meanwhile, Dee, Henkin, and Singleton (2006) as well as Meyer and Allen (1997) revealed a non-significant relationship between gender and organisational commitment. Therefore, this study inferred that female teachers are more committed to change compared to male teachers. The following four hypotheses were advanced.

\[ H5a: \] Relationship between leadership support and teachers’ affective commitment to change is stronger for female teachers compared to male teachers.

\[ H5b: \] Relationship between leadership supervision and teachers’ affective commitment to change is stronger for female teachers compared to male teachers.
**H5c**: Relationship between cohesive leadership team and teachers’ affective commitment to change is stronger for female teachers compared to male teachers.

**H5d**: Relationship between participative decision-making and teachers’ affective commitment to change is stronger for female teachers compared to male teachers.

A Vietnamese study conducted by Nguyen (2013) has shown significant differences between teachers’ commitment and their teaching experience. In contrast, earlier studies by Riehl and Sipple (1996) and Dee, Henkin, and Singleton (2006) showed teaching experience has no significant influence on teachers’ commitment. Another study shows teaching experience has a significant, albeit weak impact on Singaporean teachers’ commitment in primary and secondary schools (Chan et al. 2008). Hulpia, Devos, and Rosseel (2009a, 2012) supported that teachers with more teaching experience tend to be less committed to school compared to those who have less teaching experience. Such inconclusive empirical findings have prompted the current study to postulate the following four hypotheses.

**H6a**: There is an interaction effect between leadership support and teaching experience on teachers’ affective commitment to change.

**H6b**: There is an interaction effect between leadership supervision and teaching experience on teachers’ affective commitment to change.

**H6c**: There is an interaction effect between cohesive leadership team and teaching experience on teachers’ affective commitment to change.

**H6d**: There is an interaction effect between participative decision-making and teaching experience on teachers’ affective commitment to change.

**Figure 1** illustrates the hypothesised relationships between the four distributed leadership dimensions (leadership support, leadership supervision, cohesive leadership team, and participative decision-making) and teachers’ affective commitment to change with the interaction effects of gender and teaching experience based on the theoretical grounding and literature discussed above.

**Methods**

**Participants**

This study employed a cross-sectional quantitative survey method. Teachers with experience of five years and below are regarded as early-career teachers, whereas teachers who have six to 10 years of teaching experience are regarded as mid-career teachers (Hargreaves 2005). Kim (2019) stated teacher turnover rate is significantly higher among early career teachers as compared with experienced teachers. This view was further reiterated by Chan et al. (2008) in which they stated that teachers with longer tenure
are more likely to commit to the same profession. Thus, only early-career and mid-career teachers were involved in this study.

This study used convenience sampling procedure for sample selection. Ten early-career teachers and 10 mid-career teachers were selected based on their teaching experience from 30 primary schools each in the states of Penang (northern region) and Perak (middle region). This made up a desired sample size of 600 primary school teachers. Participation was strictly voluntary and anonymous. Questionnaires were distributed personally to the respondents with consent obtained from the Malaysian educational regulatory authorities, school principals, and teachers.

A total of 531 questionnaires were completed with a response rate of 88.5%. The study used G*Power software to calculate the minimum sample size and thus ensure the adequacy of the data (Faul et al. 2009; Hair et al. 2017). The results of G*Power for four predictors showed the required minimum sample size of 43 for this study to get the power of 0.80 and effect size of 0.15 for the analysis. Therefore, the total number of 531 of teacher sample size was considered sufficient to perform analysis in this study. Sample demographics revealed that 141 (26.6%) were male teachers, whereas 390 (73.4%) were females. Early-career teachers consisted of 252 (47.5%), whereas mid-career teachers comprised 279 (52.5%). About 51.8% of the participants were Malays, 34.8% were Chinese, and the remaining 13.4% were Indians.

Instrumentation

In this study, male teachers were coded as 0 whereas female teachers were coded as 1. Early career teachers were coded as 0 and mid-career teachers were coded as 1. This study used the revised Herscovitch and Meyer’s (2002) scale to measure teachers’ affective commitment to change. The construct was measured by six items with a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The alpha coefficient for the affective commitment to change scale was .92 (Herscovitch and Meyer 2002).
The distributed leadership dimensions, namely (1) leadership support (10 items), (2) leadership supervision (3 items), (3) cohesive leadership team (10 items), and 4) participative decision-making (6 items) were measured using a 5-point Likert scale survey from 0 (never) to 4 (always). These scales were developed and validated by Hulpi, Devos, and Rosseel (2009a, 2009b). The Cronbach’s alpha values of these distributed leadership dimensions were 0.93 (cohesive team leadership), 0.91 (leadership support), 0.79 (leadership supervision), and 0.81 (participative decision-making) respectively.

All of the 35 items were then translated into the Malay language using the forward and backward translation methods. Two content experts, one Malay language expert, and one English language expert from the local universities were involved in this study to ensure the suitability, readability, and comprehensibility of the items. Items were revised and improved based on the feedback from the evaluators. A small-scale pre-test was conducted with five primary school teachers to ensure the suitability of wordings of the survey items as well as the format and layout of the survey questionnaire. These five teachers were excluded from both the pilot and main studies.

**Data analysis procedure**

Prior to data analysis, three negative items of teachers’ affective commitment to change (AC3, AC5, and AC6) were recoded and termed as AC3R, AC5R, and AC6R. PLS-SEM using WarpPLS 6.0 (Kock 2018) computer software was used to analyse the data. PLS-SEM approach was utilised in this study due to its superiority to handle complex model and make with no assumptions about the underlying data distribution (Hair et al. 2017). For the ease of interpretation, latent variables and constructs are used interchangeably throughout this study.

Assessing a model using PLS follows a two-step process involving the assessment of both reflective measurement and structural models (Chin 2010; Hair et al. 2017). The assessment of the reflective measurement model entails an investigation of the validity and reliability of the relationships between constructs and their respective items. Four main assessment criteria were examined in the reflective measurement model: (1) indicator reliability, (2) consistency reliability, (3) convergent validity, and (4) discriminant validity. The assessment of the structural model is concerned with the relationships between the constructs (Chin 2010; Hair et al. 2017). This is followed by the moderation analysis by examining the interaction effects between the four distributed leadership dimensions, gender, and teaching experience (early-career teachers and mid-career teachers) on teachers’ affective commitment to change.

**Results**

**Data screening and cleaning**

Prior to the assessment of measurement and structural models, data screening was conducted to detect any irregularity, such as out-of-range values. This is to ensure all the data have been entered correctly. No out-of-range value was detected. Subsequently, missing values were examined. This study has identified 20 missing values based on the IBM Statistics 24.0 FREQUENCY output. This study used the available IBM SPSS Expectation-Maximisation (EM) algorithm to impute the missing values (Tabachnick and Fidell 2013).
Assessment of reflective measurement model

Indicator reliability is used to evaluate the extent to which a set of items is consistent with what it intends to measure (Urbach and Ahlemann 2010). The proposed cut-off loading value is 0.70 (Hair et al. 2017). For the assessment of measurement model, 13 items (LS6 to LS10, LV3, CL7 to CL10, DM6, AC4, and AC5R) were excluded because the loading values were lower than 0.70. The analysis with the remaining 22 items was reran.

Table 1 lists all loading values of each item were above 0.70 except Items AC2 (0.630) and AC6R (0.696). Average variance extracted (AVE) is a grand mean value of the squared loadings of all items associated with the respective construct (Hair et al. 2017). Each construct should account for at least 50% of the assigned items’ variance (Hair et al. 2017). Items AC2 and AC6R were retained for further analysis as the AVE value of affective commitment to change was 0.591. Table 1 shows AVE values ranged from 0.591 to 0.800, respectively (Hair et al. 2010). Composite reliability (CR) was used to measure internal consistency. Table 1 displays all CR values are above 0.80.

Discriminant validity refers to the extent to which constructs under investigation are truly distinct from one another. Table 2 shows that the square roots of AVE values (in bold) are larger than the correlations between constructs. The finding implied discriminant validity was established (Fornell & Larcker, 1981).

Assessment of structural model

Prior to further analysis, it is crucial to ensure no lateral collinearity issue is encountered before the assessment of structural model (Kock and Lynn 2012). Lateral collinearity refers to predictor-criterion validity (Kock and Lynn 2012). The presence of lateral collinearity could lead to spurious empirical findings because it could mask the cause-effect in the structural model (Kock and Lynn 2012). Table 1 demonstrates that all the inner variance

<table>
<thead>
<tr>
<th>Item</th>
<th>LS</th>
<th>LV</th>
<th>TL</th>
<th>DM</th>
<th>AC</th>
<th>CR</th>
<th>AVE</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>LS1</td>
<td>0.894</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.936</td>
<td>0.747</td>
<td>4.417</td>
</tr>
<tr>
<td>LS2</td>
<td>0.874</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LS3</td>
<td>0.867</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LS4</td>
<td>0.818</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LS5</td>
<td>0.867</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LV1</td>
<td>0.894</td>
<td>0.887</td>
<td></td>
<td></td>
<td></td>
<td>0.889</td>
<td>0.800</td>
<td>3.500</td>
</tr>
<tr>
<td>LV2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CL1</td>
<td>0.858</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.947</td>
<td>0.749</td>
<td>4.971</td>
</tr>
<tr>
<td>CL2</td>
<td>0.859</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CL3</td>
<td>0.852</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CL4</td>
<td>0.874</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CL5</td>
<td>0.878</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CL6</td>
<td>0.872</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DM1</td>
<td>0.835</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.946</td>
<td>0.777</td>
<td>3.701</td>
</tr>
<tr>
<td>DM2</td>
<td>0.893</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DM3</td>
<td>0.854</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DM4</td>
<td>0.915</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DM5</td>
<td>0.909</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AC1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.875</td>
<td>0.850</td>
<td>0.591</td>
</tr>
<tr>
<td>AC2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.630</td>
<td>0.847</td>
<td>1.045</td>
</tr>
<tr>
<td>AC3R</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.847</td>
<td>0.696</td>
<td></td>
</tr>
<tr>
<td>AC6R</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
inflation factor (VIF) values of supportive leadership, leadership supervision, cohesive leadership team, and participative decision-making are found below the cut-off value of 5.0 as proposed by Hair, Ringle, and Sarstedt (2011). As such, the finding indicated lateral collinearity was not a concern for this study.

Table 3 displays that H1 was supported as leadership support ($\beta= 0.459, p = .021$), leadership supervision ($\beta= 0.129, p< .001$), cohesive leadership team ($\beta= 0.459, p< .001$), and participative decision-making ($\beta= 0.470, p< .001$) were positively related to teachers’ affective commitment to change at the significance level of .50. Thus, H1, H2, H3, and H4 were supported.

Effect size was then assessed to inform the size of the effect of significant predictors of teachers’ affective commitment to change. According to Cohen (1988, p. 410), the values of 0.02, 0.15, and 0.35 represent small, medium, and large effects, respectively. Table 3 shows that leadership support, leadership supervision, and cohesive leadership team with effect sizes of 0.012, 0.019, and 0.061, respectively, have small effect on teachers’ affective commitment to change. Meanwhile, finding indicates participative decision-making with effect size of 0.092 has close to medium effect on teachers’ affective commitment to change.

Assessment of interaction effects

Gender as a moderator

Table 4 shows that there are no differences between male and female teachers for the relationship between the three distributed leadership dimensions (leadership support, cohesive leadership team, and participative decision-making) and teachers’ affective commitment to change at the significance level of .05. Thus, H5a, H5c, and H5d were not supported. However, the relationship between leadership supervision and teachers’ affective commitment to change was stronger for female teachers compared to male teachers ($\beta= 0.105, p = .007$) as shown in Table 4 and Figure 2. Thus, H5b was supported.

Teaching experience (early-career and mid-career teachers) as a moderator

Table 4 presents that the interaction effect between leadership support and teaching experience on teachers’ affective commitment to change is not significant at the level of .05. Hence, H6a was not supported. The findings indicated there was no difference

Table 3. Results of direct relationships.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>beta</th>
<th>SE</th>
<th>p-value</th>
<th>Decision</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: LS -&gt; AC</td>
<td>0.088</td>
<td>0.043</td>
<td>0.021</td>
<td>Supported</td>
<td>0.012</td>
</tr>
<tr>
<td>H2: LV -&gt; AC</td>
<td>0.129</td>
<td>0.043</td>
<td>&lt;.001</td>
<td>Supported</td>
<td>0.019</td>
</tr>
<tr>
<td>H3: CL -&gt; AC</td>
<td>0.459</td>
<td>0.041</td>
<td>&lt;.001</td>
<td>Supported</td>
<td>0.061</td>
</tr>
<tr>
<td>H4: DM -&gt; AC</td>
<td>0.470</td>
<td>0.041</td>
<td>&lt;.001</td>
<td>Supported</td>
<td>0.092</td>
</tr>
</tbody>
</table>
between early- and mid-career teachers on the relationship between leadership support and teachers’ affective commitment to change.

H6b was supported with the relationship between leadership supervision and teachers’ commitment to change was stronger for early-career teachers ($\beta = -0.123, p < .001$) compared to mid-career teachers as shown in Table 4. Figure 3 illustrates leadership supervision was stronger and positively related to teachers’ affective commitment to change for early-career teachers, but negatively related to mid-career teachers.

Table 4 shows no significant difference between early- and mid-career teachers for the relationship between cohesive leadership team and teachers’ affective commitment to change. Thus, H6c was not supported. Table 4 and Figure 4 demonstrate that the relationship between participative decision-making and teachers’ affective commitment to change ($\beta = -0.111, p = .014$) is stronger for early-career teachers compared to mid-career teachers. Therefore, H6d was supported.

Table 4. Results of moderator effects of gender and teaching experience.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Std. Beta</th>
<th>SE</th>
<th>p-value</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>H5a: LS*Gender -&gt; AC</td>
<td>0.063</td>
<td>0.043</td>
<td>0.071</td>
<td>Not supported</td>
</tr>
<tr>
<td>H5b: LV*Gender -&gt; AC</td>
<td>0.105</td>
<td>0.043</td>
<td>0.007</td>
<td>Supported</td>
</tr>
<tr>
<td>H5c: CL*Gender -&gt; AC</td>
<td>0.002</td>
<td>0.043</td>
<td>0.484</td>
<td>Not supported</td>
</tr>
<tr>
<td>H5d: DM*Gender -&gt; AC</td>
<td>-0.105</td>
<td>0.043</td>
<td>0.008</td>
<td>Not supported</td>
</tr>
<tr>
<td>H6a: LS*experience -&gt; AC</td>
<td>0.047</td>
<td>0.043</td>
<td>0.170</td>
<td>Not supported</td>
</tr>
<tr>
<td>H6b: LV*experience -&gt; AC</td>
<td>-0.123</td>
<td>0.043</td>
<td>&lt; .001</td>
<td>Supported</td>
</tr>
<tr>
<td>H6c: CL*experience -&gt; AC</td>
<td>-0.060</td>
<td>0.043</td>
<td>0.072</td>
<td>Not supported</td>
</tr>
<tr>
<td>H6d: DM*experience -&gt; AC</td>
<td>-0.111</td>
<td>0.042</td>
<td>0.014</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Figure 2. Interaction plot of leadership supervision (LV) and gender.

Figure 3. Interaction plot of leadership supervision (LV) and gender.
Discussion

The present study investigates the contextual influence of gender and teaching experience (early-career versus mid-career) on the relationship between distributed leadership functions and teachers’ affective commitment to change in a Malaysian primary school context. Several important findings were revealed as follows.

First, participative decision-making is the strongest predictor of teachers’ affective commitment to change. Teachers are likely committed to change if they feel a sense of ownership and are involved in the decision-making process, while teachers who do not have such opportunity would probably resist changes in the workplace. Principals that establish certain structures and processes in schools promote a trust and collaborative climate for teachers to participate in decision-making. The positive relationship between participative decision-making and teacher commitment to change is similar with findings of previous studies conducted by Devos, Tuytens, and Hulpia (2014), Somech (2005), as well as Stoelinga and Mangin (2010).

Second, the present study also shows a positive relationship between cohesive leadership team and teachers’ affective commitment to change. The finding signified teachers are committed if they believe their school is led by a leadership team centred on openness, mutual trust, group cohesion, open communication, and clear roles among leaders with teachers. This is coherent with findings of Hulpia, Devos, and Rosseel (2009a) as well as Hulpia and Devos (2009) in which distributed leadership significantly enhanced teachers’ affective commitment to change when there was cohesion in the leadership team.

Third, we found that leadership supervision is positively related to teachers’ affective commitment to change. This finding implies that school leaders who direct, control, and
monitor teachers’ instructional processes lead to teacher commitment to change (Hulpia and Devos 2010; Hallinger and Murphy 1985; Somech 2005). Teachers are more likely to be committed when principals offer feedback and encouragement (Rosenholtz 1989). Similarly, Robinson, Lloyd, and Rowe (2008) claimed teachers welcomed evaluative feedback from school leaders as they provide useful feedback. The findings reflected that leaving teachers to work alone without regular supervision leads to low commitment (Hulpia et al. 2012). This is a new finding that can be used due to the inconsistent findings of previous studies, which also found no significant relationship between leadership supervision and teachers’ commitment to change (Devos, Tuytens, and Hulpia 2014; Hulpia and Devos 2009; Hulpia, Devos, and Van Keer 2011).

Fourth, educational leadership scholars have stressed that leadership support could foster a collective school vision and stimulate teachers’ affective commitment to change (Bush and Glover 2012; Devos, Tuytens, and Hulpia 2014; Tian, Risku, and Collin 2016; Veeriah, Chua, and Siaw 2017). Therefore, a positive relationship between leadership support and teachers’ affective commitment to change is expected in this study. Principals’ leadership support includes several important leadership practices such as developing a shared school vision and goals, which are important to initiate a committed teaching force (Nguni, Sleegers, and Denessen 2006).

Another important finding was that the influence of leadership supervision on teachers’ affective commitment to change was stronger for female teachers compared to male teachers. One of the possible reasons to explain the finding is that females have to overcome more barriers than males to gain recognition of their performance (Grusky 1966). This is a new finding that can be used to supplement several past studies that have also reported females are more committed than their male counterparts (see Mathieu and

![Figure 4. Interaction plot of participative decision-making (DM) and teaching experience.](image-url)
In contrast, another study reported male teachers, unlike female teachers, rated their principals’ leadership support was the contributory factor towards their commitment (Nogay and Beebe 2008).

However, the relationship between leadership supervision and teachers’ affective commitment to change was stronger for early-career teachers compared to mid-career teachers. This finding could be due to the reason that “early-career teachers are more easily frustrated when their perceptions of teaching were completely different from the reality in schools” (Liu 2016, 9). Therefore, school leaders’ supervision is an important factor in boosting commitment to change, particularly for early-career teachers. Similarly, the relationship between participative decision-making and teachers’ affective commitment to change was stronger for early-career teachers compared to mid-career teachers. This result is not surprising as several recent studies have also reported autonomy is an important factor affecting early-career teachers, who tend to have higher levels of commitment to change compared to mid-career teachers (Liu 2016).

The relationship between cohesive leadership team, leadership support, and teachers’ affective commitment to change makes no difference across gender and teaching experience. The findings indicate teachers’ affective commitment to change is not fully explained by leadership factors. In fact, teachers’ commitment to change is likely attributed to internal-, external-, and personal factors in addition to leadership factors (Liu 2015, 2016; Yu, Leithwood, and Jantzi 2002). Internal factors could refer to teachers’ perception of teaching and the extent to which the change is significant. Meanwhile, external factors include school culture and resources in addition to the role of the school principal (Liu 2016).

Conclusion and suggestions

This study has important managerial and practical implications for school leaders and educational policymakers. School leaders should be aware that teachers’ affective commitment to change is influenced by their opportunity to participate in decision-making at school level. Therefore, school leaders could initiate school planning by maximising teachers’ involvement in decision-making. Furthermore, school leaders should work collaboratively and cohesively with their other leadership members in an atmosphere of trust and openness. Thus, educational policymakers could pay extra attention to preparation programme and teacher professional development workshops with an emphasis on team players in addition to managerial and leadership functions. Furthermore, school leaders should provide regular supervision and constructive feedback in terms of classroom observation and teacher evaluation in order to enhance teachers’ commitment to change.

Our study has several limitations. First, the current findings found that there are no differences between male and female teachers for the relationship between leadership support, cohesive leadership team, participative decision-making, and teachers’ affective commitment to change. The reason for the non-existent relationship is unknown and it will require qualitative research in the future. Second, this study is limited to a set of quantitative data which were collected from two out of 13 states in Malaysia. As such, future studies could involve larger sample size to ensure the data are representable and generalisable. Third, teacher samples were limited to early- and mid-career teachers.

Future studies could extend this with the inclusion of teachers who have more than 10 years of teaching experience and have been categorised as “experts” by Hargraveas
(2005) as teachers in different age groups might have different perceptions of commitment to change (Liu 2016). Next, there are other possible variables that could affect teachers’ affective commitment to change, but not taken into consideration in this study. For instance, teachers’ trust and school collaborative climate are important elements in promoting teachers’ participation in decision-making at school level (Devos, Tuytens, and Hulpia 2014; Silins and Mulford 2004). Hence, future studies should include other predictors by considering teachers or school perspectives. It is important to note that leadership supervision was found negatively related to mid-career teachers’ affective commitment to change. The findings reflected that the more the school leaders provide supervision to the mid-career teachers and the more opportunities offered to them in decision-making, the less likely they will commit to change affectively. An in-depth interview is needed to explore the possible reasons to explain such findings in future studies.

In conclusion, this study has contributed to the knowledge base of distributed leadership and teacher commitment literature by providing empirical evidence to specify the impact of distributed leadership dimensions on teachers’ affective commitment to change, beyond a general perspective of teacher commitment. Participative decision-making, cohesive leadership team, leadership supervision, and leadership support are four important leadership domains that policymakers and school leaders could focus on to promote teachers’ affective commitment to change. In particular, giving more supervision and opportunities to participate in decision-making have a significant impact on early-career teachers’ commitment to change. This study offers insights into the impact of distributed leadership functions on teachers’ affective commitment to change that will benefit school organisational practices. In essence, the current study has provided fundamental empirical evidence that could be used in future research either at a local or international context.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This work was not supported by any research grant.

Notes on contributors

Lei Mee Thien is a senior lecturer in School of Educational Studies, Universiti Sains Malaysia. Her recent research interest includes Educational Management and Leadership, Quality of School Life and Positive Education. She has published papers in referred journals such as Social Indicators Research, Child Indicators Research, Quality & Quantity, Social Psychology of Education, and Asia Pacific Education Researcher.

Donnie Adams is a senior lecturer at the Institute of Educational Leadership, Faculty of Education, University of Malaya. He obtained his PhD in Educational Leadership from the University of Malaya. He is a recipient of the University of Malaya’s Bright Sparks scholarship and a recipient of University of Malaya’s Excellence Award 2016: PhD Completion in Less than 3 Years.
References


