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An Exploration of the Relationship between Teacher Change Beliefs and Teacher Attitudes towards Change

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Abstract
The purpose of the study was twofold: a) to examine the causal relationship of teacher change beliefs (TCB) and teacher attitudes toward change (TATC); b) to investigate the moderating effects of Principal Change Leadership Competencies (PCLC), gender, age, year of experience, and school location on the above relationship. A total of 936 teachers from 47 High Performing Secondary School in Malaysia completed the survey. Structural Equation Modelling (SEM) was applied to test the models whereas multi-group comparison method in SEM was conducted to examine the moderating effects. The result demonstrated that TCB was significantly related to TATC (.89). This implied that TCB shapes TATC and provides the foundation for adoptive or resistance behaviours in school change. The findings also showed that PCLC facilitated significantly the causal relationship between TCB and TATC. Hence, school principals need to equip themselves with PCLC so to enhance positive TCB and TATC to advance change goals. However, it was found that the moderating effects of demographic factors such as gender, age, year of experience and school location were not significant moderating variables. The study offers relevant parties a lens through which they could better understand, prepare for, or enhance teacher capacity for change.
Keywords Teacher Change Beliefs, Teacher Attitudes toward Change, Principal Change Leadership Competencies, Structural Equation Modelling, Moderating Effects

Introduction

We see globalization accelerating at a fast pace today and educational reform has become a top priority for many countries. This has brought about a global paradigm shift to prioritize the development of a more technologically literate, creative and thinking workforce who can learn continuously and work with diversity, both locally and internationally. Schools, as the foundation stone of education, are thus subject to inescapable internal and external change pressures (Fullan, 2007; Hallinger, 2004; Harris, 2006).

In Malaysia, the Malaysia Education Blueprint 2013-2025 that documented eleven strategic and operation shifts for transforming the education system was launched in September 2013. Its main focus is to prepare young Malaysians for the needs of the 21st century. Particularly, the Blueprint features universal access all the way through to secondary education, halving the achievement gaps between the rich and poor, urban and rural, providing equal and quality educational opportunities for all students regardless of background, and purposefully producing students qualifying in the top third of international student assessments (Ministry of Education Malaysia, 2013). Obviously, the envisaged reform is of great complexity and school reform will fall short of the aspirations outlined in this blueprint if the teachers do not buy in and put change into practice.

Indeed, numerous researches have revealed that teacher is the most critical factor in the change process (Fullan, 2007; Hall and Hord, 2010). As teachers are the closest to the students and more alert to the needs of the students in the learning process, they are the real source of, and the vehicle for school change. Hence, they are expected to play a significant role in any school change. Thus, a study into how teachers perceive, interact and adapt to the change, specifically in Malaysian education context, will provide very practical insights into how to best lead change in schools.

The main dilemma in any organizational change is whether there is acceptance to change (Hayes, 2010; Kotter, 1999). Resistance to change is the main reason organization change initiatives fail (Deloitte and Touche, 1996). In fact, resistance to change is closely linked to the development of attitudes toward change. Importantly, a person's attitudes are always related to his or her beliefs that serve as the informational base to influence the individuals' interpretations of events, feelings, and thoughts. All these permeate choice-making processes that ultimately determine one's attitudes (Bandura, 1986). Therefore, to better understand teacher attitudes toward change (TATC), we must first understand teacher change beliefs (TCB). With consideration to the findings that beliefs and attitudes are among the most significant predictor of successful organizational change (Aslan et al., 2008; Bouckenooghe, 2009), this current study is designed to explore the relationship between TCB and TATC.

Teacher Change Beliefs

Belief is viewed as a person's subjective probability judgments of a relation between the object of the belief and some related attribute (Fishbein and Ajzen, 2010). Simply, belief refers to an individual's conception about a specific behaviour or an object. Most importantly, it serves as a guide to thought and behaviour (Bandura, 1986) and shapes ones' attitudes (Pare, Sicotte and Poba-Nzaou, 2010). The present study measured TCB by using the Teacher Change Beliefs Scale (Tai, 2013). It encompasses three main components namely: (a) *Discrepancy*; (b) *Efficacy*; and (c) *Principal Support*.

Discrepancy is seen as the belief that a change is needed as there is a gap between the current state and the desired future state in the organization (Tai, 2013). A discrepancy helps legitimize the need for change (Pare et al., 2010) or the motive for a change may be viewed as arbitrary (Armenakis et al., 2007). According to Kotter (1999), to create a sense of urgency in any change, the first step is to address the need for change in clear and dramatic terms so as to minimise the likelihood of the people's resistance.

Levin (2001) emphasizes that if teachers are not persuaded that change is needed through a justification of a clear change goal, most probably they will not direct their efforts towards school change and the possibility to embrace change will be relatively low. Indeed, *Discrepancy* is one of the valid reasons to resist change, as it will affect teachers' cognitive evaluations of the change. The school principal can probably reduce the uncertainty with school change among teachers by offering a compelling vision of the future, therefore yielding less variability in responses toward change.

Efficacy refers to the belief that teachers have the required skills and ability to cope and make the change succeed (Tai, 2013). The more the teacher is confident about his or her knowledge and skills, the greater the chances that the change can be handled effectively. If they do not equip the necessary competencies, the likelihood that they will pose resistance against the change is great. Jerald (2007) pointed out that teachers with a high sense of efficacy tend to be more open to new ideas and are more willing to experiment with new approaches. Similarly, teachers with a high efficacy show patience and make greater efforts to resolve problems when facing challenging situations (Cheung, 2008). Indeed, teachers with a high level of efficacy have been found as a significant predictor of classroom practice in the face of change (Guo et al., 2010).

Principal support refers to the belief that school principals support and are committed to the success of a change, and will take relevant strategies to face any obstacles (Tai, 2013). Teachers tend to have positive evaluations of the change when they feel that the school principal had properly expressed their concerns and is committed to the success of a change (Bernerth et al., 2007). If teachers believe management support for the change is insufficient, it will affect their response to the change initiative. Therefore, school principals need to encourage teachers to commit to the change and to motivate them to work hard, genuinely caring for them (Hughes and Benigni, 2012). Support from the leadership motivates the teaching staff, resulting in more commitment to their jobs.

Teacher Attitudes toward Change

Attitude is viewed as a learned predisposition to respond to an object (Fishbein and Ajzen, 2010). Generally people learn to favour behaviours they believe have largely desirable consequences and vice versa. Thus, attitudes are seen as one important determinant of the person's intention to perform a particular behaviour. In this study, TATC is the internal state that influences a teacher's choices of personal action, or a response tendency towards the change. It refers to a teacher's overall positive or negative evaluative judgment of a change initiative implemented by his or her school (Dunham et al., 1989; Oreg, 2006; Piderit, 2000).

As change recipients, teachers in school make sense of change and develop certain attitudes toward change through a process of their own reflection, as well as a collective sense-making that comes from a series of interactions with colleagues and the change agent – the school principal. It is perceived as a tri-dimensional concept that consists of cognitive, affective and behavioural responses to change (Dunham et al., 1989; Oreg, 2006; Piderit, 2000; Tai, 2013).

Cognitive reaction to change is the teachers' beliefs about the need for change, the significance of the change, the favourability of outcomes i.e. the extent to which the change will be benefited personally and organizationally and the knowledge necessary to manage change (Dunham et al., 1989; Oreg, 2006; Piderit, 2000; Tai, 2013). *Affective* reaction to change is the

teachers' feelings about the change. It is teachers' tendency to enjoy changes in schools. The teachers' response to change along this emotional dimension might range from positive emotions e.g. excitement, enthusiasm and happiness to strong negative emotions such as anger, resentment, frustration, anxiety or fear (Dunham et al., 1989; Oreg, 2006; Piderit, 2000). The *behavioural* reaction to change measures the extent to which teachers would take action to support or against change. It can range from strong positive intentions to support change by being actively involved in the change, for example, to negative intentions to resist it such as quitting intentions due to the change (Dunham et al., 1989; Oreg, 2006; Piderit, 2000).

The Relationship between Teacher Change Beliefs and Teacher Attitudes toward Change

The relationship between beliefs and attitudes has been studied under the theory of planned behaviour (TPB) (Fishbein and Ajzen, 2010) in psychology. According to TPB, a person's attitude toward some object is closely related to the set of his or her beliefs about the object. Numerous studies on the relationship between beliefs and attitudes toward change have been conducted in the private sector. Caporarello and Viachka (2010); El-Farra and Badawi (2012) found that change belief was one of the critical predictors of attitudes toward organizational change. However, very few researches about these two variables have been conducted in the field of education.

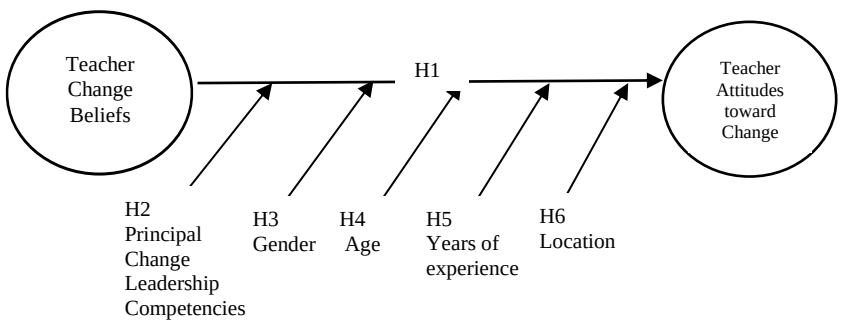
In local context, Koo (2008) conducted a case study to examine factors affecting the perceived readiness for online collaborative learning (OCL). A sample of 86 mathematics teachers of 12 secondary schools in Malaysia was involved in the study. In OCL, learners are able to interact and discuss with peers and teachers in their convenient times. The study revealed that those teachers who had positive beliefs toward the new learning paradigm have positive attitudes toward OCL. Specifically, the study demonstrated that these two components of change beliefs i.e. principal support and efficacy were important determinants affecting teacher perceived readiness for OCL.

Drawing on the relationship between beliefs and attitudes discussed above, the formation of TATC, which is determined by their beliefs, is a crucial event in the change process as teachers are the front-line change implementers in school change (Fullan, 2007; Hall and Hord, 2010). If teachers possess positive TCB, they will appreciate change efforts, both on a cognitive level as well as on an emotional level. Thus they may perform a variety of behaviours to support and initiate change such as being actively involved in change (Oreg, 2006), or be highly committed to change (Spreitzer and Mishra, 2002) to realize the change goals.

However, if teachers are not satisfied with the change efforts cognitively and affectively, an imposed change may lead to absenteeism (Martin, Jones & Callan, 2006), psychological withdrawal (Kiefer, 2005), intentions to quit (Cunningham, 2006), or attempts to resist the change effort (Smith, 2005; Zimmerman, 2006). Considering that TCB and TATC are among the most significant predictors of successful school change, the researchers need to take the initiative to examine the relationship between TCB and TATC as shown in Figure 1 and hypothesize that TCB is significantly related to TATC.

H1: Teacher Change Beliefs (TCB) is significantly related to Teacher Attitudes toward Change (TATC)

Figure 1. The Conceptual Framework with Study Hypotheses



Principal Change Leadership Competencies

In the context of change, teachers look up to their leaders (school principals) as a source of certainty as they are at the center of the school change. They need to initiate, implement, evaluate and sustain the change. To maximize the change efforts, school principals have a strategic role in determining the organization's strategies, plans and day-to-day management practices. However, to develop sound strategies and plans, and best management practices, they need relevant competencies. This competency factor influences the choices and decisions they make in developing these. Over time, these strategies, plans and management practices may influence TCB, and being a behavioural predisposition, TCB may affect TATC. In other words, the process of initiating-implementing-evaluating-sustaining the change will largely depend on the strategies, plans, and management practices, the quality of which corresponds with their competencies. Seen in a positive light, school principals can modify, enhance and shape TCB, and ultimately the subsequent TATC. In line with the above rationale, principal change leadership competencies (PCLC) can facilitate the relationship between TCB and TATC.

In this study, PCLC is the knowledge, skills, abilities and behaviors that demonstrate excellent performance (Crawford, 2003; Duffy, 2009), and that are required of a principal in influencing teachers to make change goal a reality. Levin (2001, May) emphasized the importance of the school principals' need to possess competencies to lead change in his study. Kursunoglu and Tanriogen (2009) also made the same point in their study that principals must have required skills to implement effective school change.

In the year 2013, Tai (2013) developed the Principal Change Leadership Competency Model to identify PCLC that facilitates change in Malaysian secondary schools. Four domains of

competencies were identified based on four phases of change namely, a) *Goal Framing*; b) *Capacity Building*; C) *Defusing Resistance and Conflict*; and d) *Institutionalizing*. The first phase of the change *Goal Framing*, stresses the importance of constructing a goal to direct the change effort before attempting any change. The second phase of the change *Capacity Building*, develop the competence to meet change requirements. The third phase of the change *Defusing Resistance and Conflicts*, highlights the importance of mitigating resistance and conflict effectively in the change process. *Institutionalizing* is the fourth phase of the change process, where it is important to make the change stick and to prevent the organization from slipping back into the old ways of working.

Sensing the importance of PCLC in facilitating the relationship between TCB and TATC which has close links to the likelihood of teachers embracing change, the researchers have taken the initiative to examine the moderating effects of PCLC as shown in Figure 1 and thus the hypothesis,

H2: The relationship between TCB and TATC is moderated by Principal Change Leadership Competencies;

Besides, to further explore the relationship between TCB and TATC, the study also aimed to investigate whether demographic factors such as gender, age, year of experience, and school location are significant moderators (Figure 1) and hypothesize that

H3: The relationship between TCB and TATC is moderated by gender;
H4: The relationship between TCB and TATC is moderated by age;
H5: The relationship between TCB and TATC is moderated by year of experience;
H6: The relationship between TCB and TATC is moderated by school location;

Methodology

Population

There were 177,388 secondary school teachers in Malaysia. The study population was 13,900 High Performing Secondary Schools (HPSS) teachers. HPSS and the concerned teachers were the sites and the respondents of the study as they are “information rich” and of central importance to the objective of the study (Patton, 2002). Due to planned change involves intentional acts designed to disrupt the status quo and move the organization towards a more effective state (Hayes, 2010), the likelihood that principals in HPSS leading change is usually higher than principals in mediocre or low performing schools. Consequently, teachers in HPSS experience more changes in comparison with teachers in mediocre or low performing schools, resulting in their (those in HPSS) attitudes toward change being more obvious for purposes of research. Also, to ensure the validity of the information, only those school principals holding the post for at least one year and teachers who had taught at least one year in HPSS were selected for the survey.

State	Day Secondary School			Fully Residential Secondary School			Religious Secondary School			Total		
	ANS	NSS	NR	ANS	NSS	NR	ANS	NSS	NR	ANS	NSS	NR
Pahang	11	3	60	6	2	40	2	0	0	19	5	100
Johor	15	4	80	6	1	20	4	1	20	25	6	120
Selangor	9	2	40	6	1	20	8	2	40	23	5	100
Penang	9	2	40	2	1	20	3	1	20	14	4	80
Sarawak	0	0	0	4	1	20	0	0	0	4	1	20
Kelantan	5	1	20	5	1	20	6	2	40	16	4	80
N.Sembilan	3	1	20	5	1	20	3	1	20	11	3	60
Perak	6	1	20	6	2	40	3	1	20	15	4	80
Kedah	7	2	40	6	1	20	4	1	20	17	4	80
Sabah	0	0	0	2	1	20	0	0	0	2	1	20
Perlis	2	1	20	1	0	0	1	0	0	4	1	20
K.Lumpur	6	1	20	5	1	20	1	0	0	12	2	40
Melaka	2	1	20	2	1	20	1	0	0	5	2	40
Trengganu	5	1	20	4	1	20	10	3	60	19	5	100
Total	80	20	400	60	15	300	46	12	240	186	47	940

Note.ANS=Actual number of school; NSS=Number of school for survey; NR=Number of respondent

Sampling Procedure

To ensure each important segment of the population was represented, multiple-staged stratified random sampling procedure was applied in the study. There were three strata in the study population namely, Day Secondary School (DSS), Fully Residential Secondary School (FRSS), and Religious Secondary School (RSS). Of 186 HPSS in Malaysia, there were 80 DSS, 60 FRSS, and 46 RSS. A total of 25 % of each stratum of the population i.e. 20 DSS, 15 FRSS, and 12 RSS or 47 HPSS were identified randomly for the survey.

Again, proportionate stratification procedure was used to stratify the HPSS in each state respectively. This sampling technique gives all the three strata in each state equal chances of being selected. Following this, the sample was identified. With 47 schools identified and based on the official list of teachers provided by the respective State Education Departments, 20 teachers from each school were selected as sample by using the simple sampling method. Consequently, 400 teachers were identified for DSS, 300 for FRSS, and 240 for RSS. In short, a total number of 940 respondents were chosen for the survey, representing 33% of the total number of teachers in 47 HPSS (N=2,863). The number of respondents for each stratum in each state is shown in Table 1.

Survey Instrument

TCB was examined using *Teacher Change Beliefs Scale* (Tai, 2013), adapted from *Organizational Change Recipient Beliefs Scale* developed by Armenakis et al (2007), and *Readiness for*

Organizational Change Scale developed by (Holt et al., 2007). It encompasses three dimensions namely: (a) *Discrepancy*; (b) *Efficacy*; and (c) *Principal Support*. TATC was operationalized using *Teacher Attitudes toward Change Scale* (Tai, 2013), which was adapted from *Attitudes toward Change Scale* developed by Dunham et al. (1989). It was validated in a local education context and consists of three dimensions namely: (a) *Cognitive*; (b) *Affective*; and (c) *Behavioural to Change.* Whereas PCLC was measured using *Principal Change Leadership Competencies Scale* (Tai, 2013) which consists of four dimensions namely: (a) *Goal Framing*, (b) *Capacity Building*, (C) *Defusing Resistance and Conflict*, and (d) *Institutionalizing.*

The factor loadings for all the items of the above three scales were ranging from .64 to .91. As the composite reliability index for each dimension of each scale was between .62 to .82, and thus featuring good convergent validity. Additionally, the Average Variance Extracted (AVE) of the factors of each scale was greater than 0.50, thus provided evidence for discriminant validity (Hair et al., 2006).

The instrument uses a Likert-type ranking with scores ranging from one to six. Scoring was obtained by assigning 1 to “strongly disagree”, 2 to “disagree”, 3 to “moderately disagree”, 4 to “moderately agree”, 5 to “agree”, and 6 to “strongly agree”. As cultural differences could result in non-equivalence that may confuse results, the local validated TCB Scale, TATC Scale and PCLC Scale were needed in the study.

Data Analysis

A total of 940 sets of questionnaires were distributed and eventually 938 sets were returned (response rate of 99.78%). Two reasons contributed for the high response rate: a) the questionnaire administration was closely monitored by the researchers specifically during the grace period – the researchers personally contacted those schools with no response at least two times via phone calls; b) all respondents were from HPSS which normally have effective school management including a good mechanism for carrying out surveys. Two sets of questionnaires were excluded from further analysis as there were unaccepted errors. Simply put, a total of 936 sets of questionnaires were included for the final analysis.

To examine the relationship between TCB and TATC, a full Structural Equation Modelling (SEM) hypothesized structural model was constructed to identify whether the magnitude of the factor loadings were substantially significant. To test the moderating effects, a multi-group structural equation was conducted (Byrne, 2001). For each of the five moderation tests (PCLC, gender, age, years of experience, and school location), the dataset was split into two subgroups. For PCLC, the mean was used as a cut-off point in dividing the respondents into two groups – the high and low PCLC groups. For the age and years of experience groups, instead of four groups, it was re-divided into two groups for data analysis, a) to account for their respective small sample sizes, which prohibited proper SEM parameter estimation; and b) in a multi-group comparison in SEM, the size of the groups should be as close to each other as possible to guarantee comparability (Walsh et al., 2008).

Two runs of the data were required – the constrained and the unconstrained model for each subgroup were tested and compared simultaneously. Differences in the chi-square values between the two models of both of the subgroups determined whether the variable had a moderating effect on the relationship between TCB and TATC. In other words, if the model

without any constraints was significantly better than the constrained one, i.e. if the chi-square value between the unconstrained and constrained model differed by more than 3.84, a moderating effect exists (Kline, 2011).

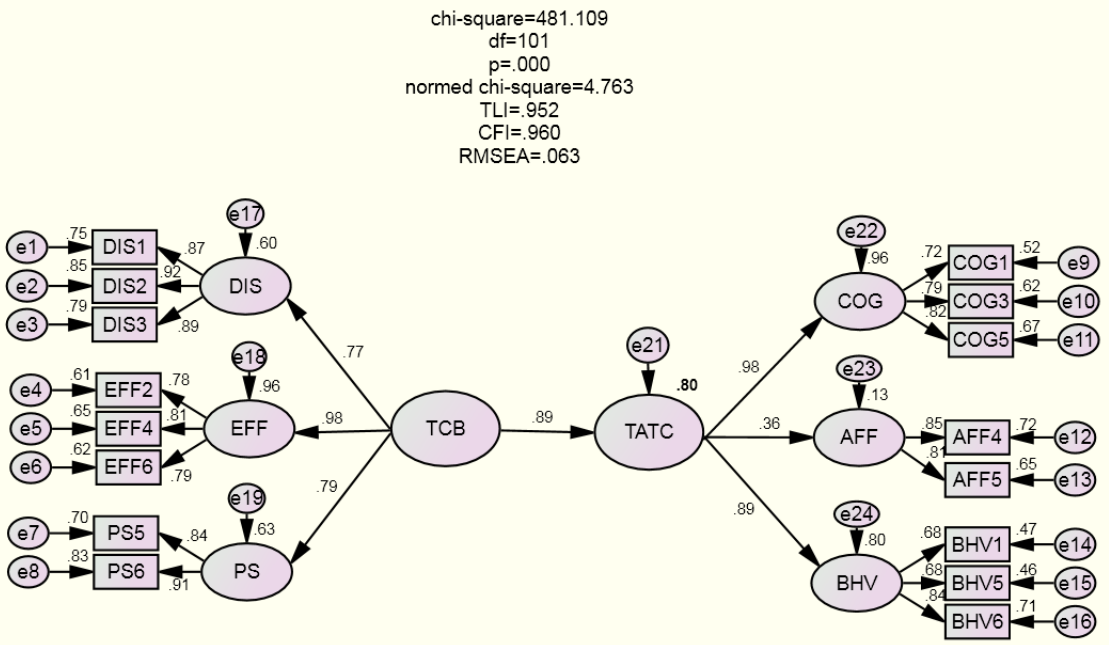
Demographic Characteristics

Of the respondents completing the questionnaires, 75.3% (N=705) were female and 24.7% (N=231) were male. There were 36% (N=337) in the age group of 41 to 50 years, 34.2% (N=319) of the ages of 31 to 40 years, 16.8% (N=157) 21 to 30 years and 13% (N=122) 51 to 60 years. Most of the respondents or 22.1% (N=207) had worked more than 20 years, 20.2% (N=189) worked between 11 to 15 years, 21.2% (N=198) 1 to 5 years, 19.3% (N=181) 6 to 10 years and 17.2% (N=161) had worked 16 to 20 years. A total of 71.6% (N=670) of the respondents were from urban schools and 28.4% (N=266) were from rural schools.

Findings

As shown in Figure 1, the magnitude of factor loadings in the hypothesized model were substantially significant with normed chi-square = 4.887, TFI = .951, CFI = .959, and RMSEA = .064, indicating a good fit. As a whole, the estimated structural model fits the data adequately well. This meant that the model's parameter estimates were consistent with the hypotheses suggested in the study. Importantly, the result of the study showed that TCB was significantly related to TATC (.89). In other words, TCB is an important predictor of TATC whereby TCB shapes TATC and provides the foundation for adoptive or resistance behaviours in school change. In short, the impact of TCB on TATC was very great.

Figure 2. The Structural Model of TCB and TATC



Note: TCB=Teacher Change Beliefs; DIS=Discrepancy; EFF=Efficacy; PS=Principal Support; TATC=Teacher Attitudes toward Change; COG=Cognitive; AFF=Affective; BHV=Behavioural

Next, the hypothesized causal structure in the simultaneous tests of the four variables, including PCLC, age, year of experience, and school location, as shown in Table 2, turned out a good fit for each subgroup (TLI>0.90; CFI>0.90; RMSEA<0.08; x^2/df<5.0) indicating their overall acceptability. For gender, the analysis of the model fit also yielded acceptable values for most of the model fit indices except RMSEA with a value of 0.082 and 0.083, which was slightly above the recommended value of 0.080. The modification indices showed that there was a possible covariance between the error terms within the male and female model. However, in maintaining consistency with the other group and sub-group models, the models were not altered.

As shown in Table 2, with chi-square value between the unconstrained and constrained model differed by more than 3.84, PCLC significantly moderated the path relationship of TCB and TATC. Thus, PCLC was a significant moderating variable. However, the results of the model comparison of the four demographic factors of gender, age, year of experience, and school location showed that most of the fitness indexes for the unconstrained model were not better than the constrained model. Likewise, the hypothesized causal relationship in the models for each subgroup of each variable of the four demographic factors was statistically not significant (p<0.001), with the chi-square value between the unconstrained and constrained model differing by less than 3.84. These implied that all the four demographic factors did not moderate the path relationship between TCB and TATC. In other words, they were not significant moderating variables.

Table 2. Result of Moderating Effects

Variable	Category	Model	x^2	x^2 difference	df	TLI	CFI	RMSEA	x^2/df	Moderation Result
Principal Change Leadership Competencies	High	CM	286.953	3.878	101	.930	.941	.065	2.841	Significant
		UM	283.085		100	.930	.942	.064	2.831	
	Low	CM	345.462	6.993	101	.934	.945	.070	3.420	Significant
		UM	338.469		100	.935	.946	.070	3.385	
Gender	Male	CM	262.240	3.664	101	.913	.927	.083	2.596	Not Significant
		UM	258.576		100	.913	.928	.082	2.582	
	Female	CM	400.403	.447	101	.951	.959	.065	3.964	Not Significant
		UM	399.956		100	.950	.959	.065	4.000	
Age	21-40	CM	385.075	.077	101	.925	.937	.077	3.813	Not Significant
		UM	384.998		100	.924	.937	.077	3.850	
	41-60	CM	284.676	.083	101	.957	.964	.063	2.819	Not Significant
		UM	284.593		100	.956	.963	.063	2.846	
Years of Experience	<15	CM	415.315	.937	101	.931	.942	.074	4.112	Not Significant
		UM	414.378		100	.930	.942	.074	4.144	
	>15	CM	255.327	.235	101	.956	.963	.065	2.528	Not Significant
		UM	255.092		100	.955	.962	.065	2.551	
School Location	Urban	CM	412.197	.601	101	.946	.954	.068	4.081	Not Significant
		UM	411.596		100	.945	.954	.068	4.116	
	Rural	CM	223.522	3.672	101	.946	.954	.068	2.213	Not Significant
		UM	219.850		100	.946	.955	.067	2.198	

Note. CM=Constrained Model; UM=Unconstrained Model

Discussion

The result of the study revealed that TCB is significantly related to TATC. This implies that the impact of TCB on TATC is very great – the stronger the TCB, the greater the enhancement of TATC and vice versa. Clearly, the finding reaffirmed the theory of planned behaviour developed by Fishbein and Ajzen (2010) that a person's beliefs determine his or her attitudes. The finding also congruent with Bandura's view that beliefs influence the individual's interpretations of events, choice and decision making which ultimately determines the individual's attitudes (Bandura, 1986). Indeed Koo (2008) emphasizes that the teachers' perceptions and beliefs are the most critical predictors of individual change in their teaching practices.

The reason why TCB greatly influencing TATC may relates to the fact that strong TCB will reduce the uncertainty associated with school change and therefore leave less room for teachers to make interpretations of the situation negatively. Consequently, this yields less variability in TATC. Obviously, TCB is a strong predicator of TATC that TCB shapes TATC and provides the foundation for adoptive or resistance behaviours. In other words, TATC is grounded in a higher order concept, the change beliefs.

When teachers were first exposed to information on school change, they form beliefs about the change. The main concerns of the teachers were whether the change is needed – there is a gap between the current state and the desired state (*Discrepancy*), whether one has the competencies and confidence to achieve the change goals, whether the school itself is able to implement the change effectively (*Efficacy*), and how school leaders support the concern change (*Principal Support*). While TCB is influenced and formed by direct observation, information received from outside sources or through various inference processes has positive and negative influence on TATC i.e. whether they will appreciate the change on a *Cognitive* level (recognizing the need and the significance of the change), *Affective* level (individual's feelings about the change and tendency to enjoy changes) and *Behavioural* level (the actions for or against change) (Tai, 2013). As a result, some teachers are more receptive to change while others are not.

The finding also deepens our understanding of Bandura's view about self- process in social psychology by which human agency is exercised. According to Bandura (1993), the impact of most environmental influences on human action is heavily mediated through self-processes and these give meaning and valence to external events. Self-influences hence operate as critical proximal determinants that are central to causal processes. More specific to this study, teachers make causal contributions to their own functioning through mechanisms of personal agency. Among the mechanisms of agency, the most critical and pervasive is the influence of TCB on TATC.

Therefore, it is not surprising that Armenakis et al (2007) suggested that change agents should execute a process to influence the beliefs of the change recipients. They need to monitor those beliefs as a way of assessing progress so as to increase the possibility of embracing change. If school principals aware the importance of this and strategically strengthen the teacher's self-influences through the mechanism of personal agency (the belief system), it will not be too difficult to get buy-in from teachers to the change. In relation to this, school principal's need to proactively enhance TCB before attempting any change suggested in the Malaysia Education Blueprint 2013-2025. It also would be more meaningful to apply this knowledge once the school principal finds that TATC in the school is not encouraging. By reflecting and examining the actual level of TCB among the teachers through periodic assessment, followed by purposeful corrective actions such as strategically designed staff development programs, or through relevant day-to-day management practices, school principals can improve TATC gradually and effectively.

Next, the examination of the moderating influence of five variables in the causal relationship of TCB and TATC also yielded important insights. First, PCLC was found as a significant moderator in the relationship of TCB and TATC. In other words, principals who have different level of PCLC i.e. the subsequent competencies for the four phases of the school change which comprised of *Goal Framing, Capacity Building, Defusing Resistance and Conflict and Institutionalizing,* can certainly influence TCB through three main aspects namely, *Discrepancy*,

Efficacy, *Principal Support,* ultimately getting buy-in from the teachers to the change if teachers appreciate the change on a *Cognitive*, *Affective* and *Behavioural* level.

Specifically, during *Goal Framing*, the first phase of change, if school principals are able to influence TCB on *Discrepancy*, they have the competency to initiate dialogue to articulate the need for change, and make teachers realize the consequences of changing and not changing. If the change is viewed as important by the teachers, i.e. teachers appreciate the change on a *Cognitive* level, the possibility of teachers embracing school change – the *Behavioural* level will be relatively high and vice versa.

At *Capacity Building*, school principals need to enhance teacher efficacy, ensures support mechanisms and promotes learning so to create and sustain a positive climate for the change. As such, they need to monitor the readiness of the teachers, plan how to develop the teachers' capacity through staff development programs, so that teachers are able to perform the new task skilfully. All these initiatives finally will enhance *Efficacy* that can impact teachers' *Cognitive* and *Affective* level and the probability of teachers embracing school change; hence the *Behavioural* level will be improved gradually.

In *Defusing Resistance and Conflict*, school principals need to recognize the dynamics of resistance and conflict among the staff. They need to identify both the supporters and who the main resistors are. In this way, school principals can plan strategically to overcome resistance. If school principals are unable to create opportunities for meaningful dialogue that gives teachers a stake in the change, negotiate the need for change with teachers who resist change, and help teachers through their emotional reaction to change, then teachers are not likely to assess the change at the *Cognitive* level. Only when teachers feel the school leader has addressed their *Principal Support*, they are more probably to commit to the change affectively and behaviourally.

At the Institutionalizing stage*,* the school principal needs to consolidate the change and hold on to gains. Firstly, at the *Cognitive* level, the school principal needs to analyse objectively the final change outcomes so as to examine whether the change has been implemented as intended, whether the implemented change is bringing about the desired impacts, whether the change plan continue to be relevant. Secondly, to show their continuous *Principal Support*, school principals need to create chances for sharing best practices among the departments so that the new ways of working become the norm of the whole organization. These would allow teachers to settle in, learn about, and ultimately master the new way of working and supporting the change at the *Affective* and *Behavioural* levels.

However, contrary to PCLC, the study showed that demographic factors such as gender, age, year of experience, and school location were not significant moderating factors. This implies that demographic factors do not significantly affect the causal relationship between TCB and TATC. Regarding demographic factors, this finding reaffirmed the theory of planned behaviour (Fishbein and Ajzen, 2010) that regardless of the demographic factors, at the very basic level, the totality of a person's beliefs serves as the informational base, which ultimately determines one's person attitudes. Also, in comparison with the previous finding, PCLC and not demographic factors, was a significant moderator to a large extent in the relationship of TCB and TATC. Hence this finding gives an important insight that the demographic factor was not critical, in facilitating the influence of TCB on TATC.

Obviously, PCLC is a critical moderator that can affect TCB and TATC to advance change goals where leadership influence is exercised through competencies that seek to accomplish functions for the change. Therefore, if school principals equip themselves with PCLC and apply it accordingly, there is a high possibility to improve TCB and TATC, and ultimately getting buy-in from the teachers to the change. Focus should then be given to introducing PCLC to the school principals based on developmental interventions at different stages of school change. This could be accomplished by authorities such as Institute Aminuddin Baki, Ministry of Education who is leading the design and administration of training courses for school principals in Malaysia.

Implication of the Study

Firstly, the study provides practical insights for school principals, who are the change agents, about how teachers perceive, react and adapt to change so to improve TCB and TATC, and how PCLC can facilitate TCB and TATC in the change process. As TATC is closely linked with TCB, and PCLC is a significant moderator in this relationship, an in-depth focus on TCB through organizational strategies, plans and day-to-day management practices by school principals is one of the effective ways to improve TATC. Hence, there is a dire need for school principals to equip themselves with PCLC with the goal of effecting and implementing positive change with minimal resistance from the teachers.

Secondly, although many studies have been conducted on organizational change, few have been conducted in relation to employee (i.e. teacher) beliefs and attitudes. Specifically, there is hardly any research done on individual beliefs in predicting attitudes towards change, as most of the research in this area have focused on contextual variables such as organizational support (e.g., El-Farra and Badawi, 2012), information (e.g., Miller et al., 1994; Wanberg and Banas, 2000), and organizational culture (e.g., Lorenzo, 1998; Abdul Rashid et al., 2004). This specific study on identifying the link between TCB and TATC has been an attempt to fill this research void.

Thirdly, there is also a lack of local research literature representative of empirical research into the relationships between TCB, TATC and PCLC. Indeed, the need for research in Malaysian public schools with respect to change might even be urgent as the Malaysian education system is already in the intensive period of change (2013 to 2025). Hence, the study may offer some new perspectives and even action plans to increase teacher capacity for change.

In short, this study provides a preliminary insight about the causal relationship of TCB, TATC and PCLC in Malaysia. From the perspective of human resource, it helps school leaders in predicting reactions to professional development interventions and the development of interventions for the teachers so as to unleash and maximize the likelihood of positive TCB and TATC. It offers knowledge base and practical insights for local practitioners and relevant parties yet another dimension in enhancing teachers' readiness for change.

Limitations and Directions for Future Research

First, the survey approach in the study provided a snapshot of the variables under examination. However, there was no investigation of the longitudinal impact of TCB on TATC and the moderating effects of the five variables on the concerned relationship. The information gathered within an average short time may not reflect the actual picture. Additionally, individual

perceptions may be equally dynamic if the system is constantly redefining itself in the organizational change (Waldrop, 1992). Hence, investigation within a longer time frame which combines with surveys, interviews and observations should take into consideration. While the research reveals that TATC is closely related to TCB and the relationship between these two variables was moderated significantly by PCLC, future research should examine fully the relationship among these three variables in a more specific and detailed manner. In so doing, the reciprocal relationship among these three variables can be captured to provide better picture and interpretation of the findings.

Conclusion

Leading change in schools is challenging. The roles played by school principals and teachers are equally critical and significant in realizing the envisaged reform. To gain the support from the teachers to the change, school principals need to equip themselves with PCLC so as to facilitate TCB and TATC effectively, with the goal of embracing and effectuating positive change that will meet the vision set out in the Malaysian Education Blueprint 2013-2025. When school principals are competent to stimulate and inspire the front-line change implementers (the teachers), there will be a greater enthusiasm all round to commit to actualizing positive change, to a large extent, transforming Malaysia's education system over the next one-and-a-half decades.

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