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A Causal Relationship Model of Teachers' Work Engagement

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The purpose of this study was to examine the antecedents and consequences of work engagement model for Thai teachers. The model posits that personal resources, job resources, and job demand influence work engagement, which in turn predict work behavior (i.e., teacher role behavior and organizational citizenship behavior). The sample consisted of 417 elementary teachers in Bangkok Metropolis administration. Self- report inventories, with 5 point rating scales ranging from absolutely true to absolutely not true, were designed to measure the antecedents and consequences of work engagement, and were administered to collect data. The self-report inventories were acceptable in terms of discrimination power, validity, and reliability. The structural equation modeling (SEM) technique was employed to test the causal relationship model of work engagement. Results using SEM confirmed that the alternative model fitted the data. Specifically, personal resources (i.e., psychological immunity and intrinsic motivation) and job resources (i.e., justice climate, teacher-student relationships, support from coworkers, and supports from supervisors) positively affected work engagement. Work engagement had an impact on teacher role behavior and organizational citizenship behavior. In other words, work engagement mediated the relationship between personal–job resources and work behavior. In addition, job demands negatively affected teacher's role behavior and organizational citizenship behavior. The model could account for 70.9 percent of variance in teacher's role behavior and 67.2 percent of variance in organizational citizenship behavior. Implications for theory and practices are discussed.

Keywords: work engagement, personal resources, job resources, job demands, work behavior

It is acknowledged that organizations need individuals who work enthusiastically with full capacity and potential in their organizations. Specifically, Thailand is moving towards ASEAN Community in 2015 that preparing in education for ASEAN community is challenges (Yaakub, 2015). Consequently, teachers' roles are to improve quality of education and student development that are ready for changing. The important mission requires teachers to actively invest themselves physically, emotionally, and cognitively to their work. That is to say, teachers should have work engagement. Work engagement is defined as a positive, fulfilling, work-related state of mind (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002). The concept of work engagement has gained attention from human resources and organizations because of its link to individual and organization performance outcomes (Bakker & Demerouti, 2008). Research conducted in several occupations have shown that persons who are engaged in their work are more likely to display higher work performance both in-role and extra-role performance (Bakker, 2011). For example, findings from educational setting showed that engaged teachers were more effective teachers (Bakker & Bal, 2010) and had students engaging in learning (Klassen et al., 2012). Although work engagement has positive characteristics for teachers, there is quite limited research for understanding antecedents and consequences of work engagement in teaching occupation. Consequently, to develop a better understanding of a model of teachers' work engagement, this study is interested in examining a comprehensive model of antecedents and consequences of work engagement for Thai teachers. The model posits that personal resources, job

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resources, and job demand influence work engagement which in turn predicts teacher role behavior and organizational citizenship behavior. This study will provide directions to enhance teachers' work engagement and work effectiveness. It will also extend the body of knowledge in work engagement.

Model of Work Engagement

Researchers have proposed various models of engagement. For example, Saks (2006) defined employee engagement including job engagement and organization engagement. He proposed a model of antecedents and consequences of employee engagement. Antecedents consisted of job characteristics, perceived organizational support, supervisor support, rewards and recognition, procedural justice, and distributive justice whereas consequences included job satisfaction, organizational commitment, intention to quit, and organizational citizenship behavior. To test his model, Saks found that antecedent variables explained 30% variance in job engagement and 39% variance in organization engagement whereas job characteristics and organizational support were significant predictors of job engagement. By using multiple regression analyzes, job engagement predicted job satisfaction, organizational commitment, intention to quit, and organizational citizenship behavior. Saks also suggested that the relationship between the antecedent variables and the consequences was partially mediated by job and organization engagement.

According to the job demands-resources model (JD-R) (Bakker, Demerouti, & Verbeke, 2004), work characteristics can be distinguished as job demands (i.e., physical, social, and organizational aspects of the job that require physical and/or psychological effort) and job resources (i.e., those aspects of the job that may reduce job demands, achieve work goal, and stimulate personal growth). The JD-R model assumes two psychological processes: 1) an energetically process (i.e., job demands-burnout-health problems 2) a motivational process (i.e., job resources-engagement-performance). The model has been examined in occupations and found that job demands are related to burnout whereas job resources are related to engagement (Bakker, 2011). For example, Hakanen, Bakker, and Schaufeli (2006) tested the JD-R model in Finnish teachers, identifying job demands as disruptive pupil behaviors, workload, and a poor physical environment, while job resources as job control, access to information, supervisory support, innovative school climate, and social climate. The findings supported the two processes in the JD-R model. Specifically, burnout mediated the effects of job demands on ill health, whereas work engagement mediated the relationship between job resources and organizational commitment. Bakker and Demerouti (2008) also proposed the model of work engagement assuming that job and personal resources independently or together predict work engagement. Moreover, job and personal resources positively affect engagement when job demands are high. Work engagement also has a positive effect on job performance. Specifically, the model shows the feedback loop between job performance and the resources.

Based on analyzing and synthesizing the model of work engagement, sufficiency economy philosophy (Office of the Royal Development Projects Board, 2007) and positive work behavior in organization, the conceptual model of a causal relationship of teachers' work engagement illustrated in Figure 1 consists of direct effects of personal resources (psychological immunity and intrinsic motivation), job resources (justice climate, colleague support, supervisor support, and teacher-student relationships), and job demands (workload, physical work environment, work control climate, and student misbehavior) on teachers'

work engagement (vigor, dedication, and absorption) and indirect effects of these factors on teacher role behavior and organizational citizenship behavior. In other words, work engagement mediates the relationship between the three factors and work performance.

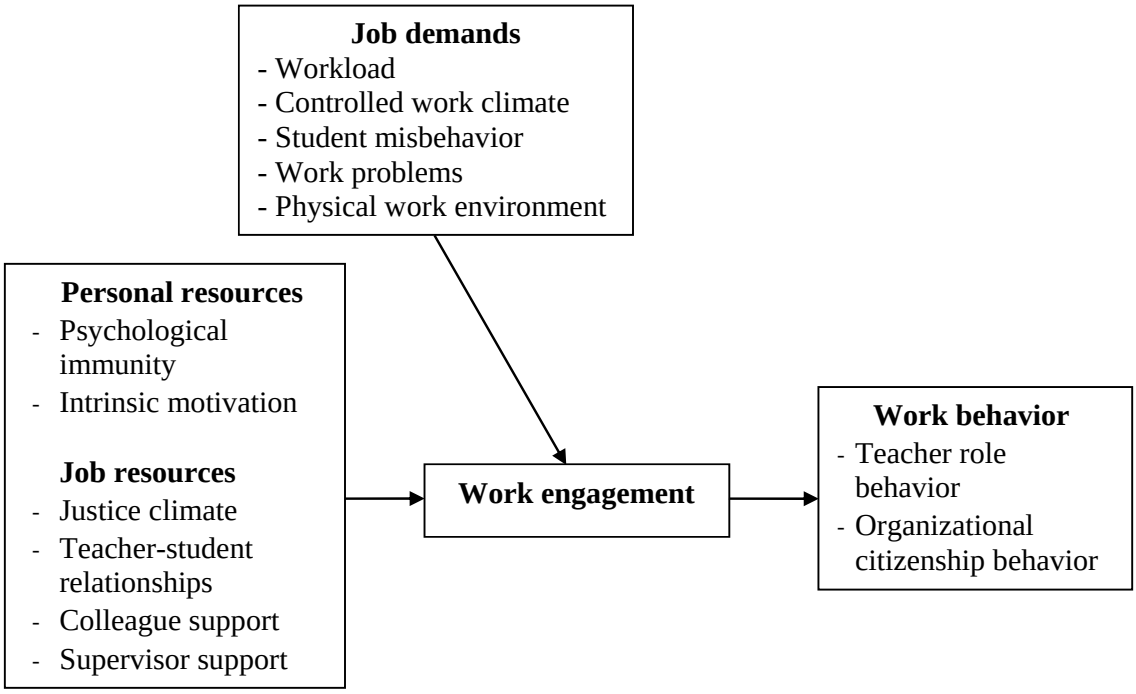


Figure 1. The Conceptual Model of a Causal Relationship of Teachers' Work Engagement.

Methodology

Participants

A sample of 417 elementary teachers in Bangkok Metropolis administration received the Survey of Work Engagement. The survey sample was derived by a random stratified sampling method according to school sizes. The sample consisted of 73 male teachers and 344 female teachers. 70.3% of respondents had academic qualifications of bachelor degree. 46.9% of respondents were in medium school sizes, 36.9% were in large school sizes, and 10% were in small school sizes.

Measures

The Self-report inventories designed to measure the variables were used to collect the data. Participants were asked to indicate each item in the inventories on 5-point Likert-type scales ranging from absolutely true to absolutely not true. Each type of the variable measured is described below.

Job demands

Workload, physical work environment, controlled work climate, and student misbehavior were used as indicators of job demands. Workload (13 items) assessed time, quantity, and quality pressures in teacher role. Physical work environment (4 items) measured teachers' perception of inappropriate physical work environment. Controlled work climate (7 items) assessed non-work autonomy, lack of flexibility, and strict monitor. Work problems (6 items) measured teachers' knowledge and competency. Student misbehavior (5 items) measured perceptions of students' inappropriate behavior. The internal consistency reliability estimates (Cronbach's alpha coefficients) for workload, physical work environment, controlled work climate, work problems, and student misbehavior were .77, .62, .77, .75, and .66 respectively.

Job resources

Justice climate, colleague support, supervisor support, and teacher-student relationships were indicators of job resources. Justice climate was defined as teachers' perceptions of how they were treated by their organization. The questions measuring justice climate (20 items) addressed distributive, interactional and procedural justice. Colleague support was assessed using 5 items corresponded to feedback, appreciation, and emotional support in work from coworkers. Supervisor support was assessed using 3 items that measured individuals' perceptions of being appreciated and cared for by their supervisors. Teacher-student relationship (5 items) measured teachers' satisfaction with their students and perceptions of closeness, appreciation, and recognition. The Cronbach's alpha coefficients for justice climate, colleague support, supervisor support, and teacher-student relationships were .89, .82, .87, and .88 respectively.

Personal resources

Psychological immunity and intrinsic motivation were used as indicators of personal resource. The short version (15 items) of Self-Immunity Scale (Choochom, 2013) was used to measure teachers' ability to protect themselves from helplessness and insecurity risks and to cope with them appropriately. The internal consistency (Cronbach's alpha) for this scale was .80. Intrinsic motivation scale (Choochom, Sucaromana, & Chuawanlee, 1999) of 7 items assessed individuals' need to act for its own sake. The Cronbach's alpha coefficient for this scale was. 68.

Work engagement

Work engagement was assessed using a 9-items short version of the Utrecht Work engagement scale (UWES) developed by Schaufeli, Bakker, and Salanova (2006). The scale consists of three dimensions: vigor, dedication, and absorption. The internal consistency (Cronbach's alpha) for this scale was .86.

Teacher role behavior

Teacher role behavior was defined as teachers' Work performance. The 21 items measuring teacher role behavior included curriculum administration and learning

management, learner development, and classroom management. The Cronbach's alpha coefficient for this scale was .91.

Organizational citizenship behavior

Organizational citizenship behavior (15 items) assessed individual's behavior that was discretionary and helpful to organization but not a job requirement. Operationalization of organizational citizenship behavior included altruism, conscientiousness, sportsmanship, courtesy, and civic virtue. The Cronbach's alpha coefficient for this scale was .85.

Data Analysis

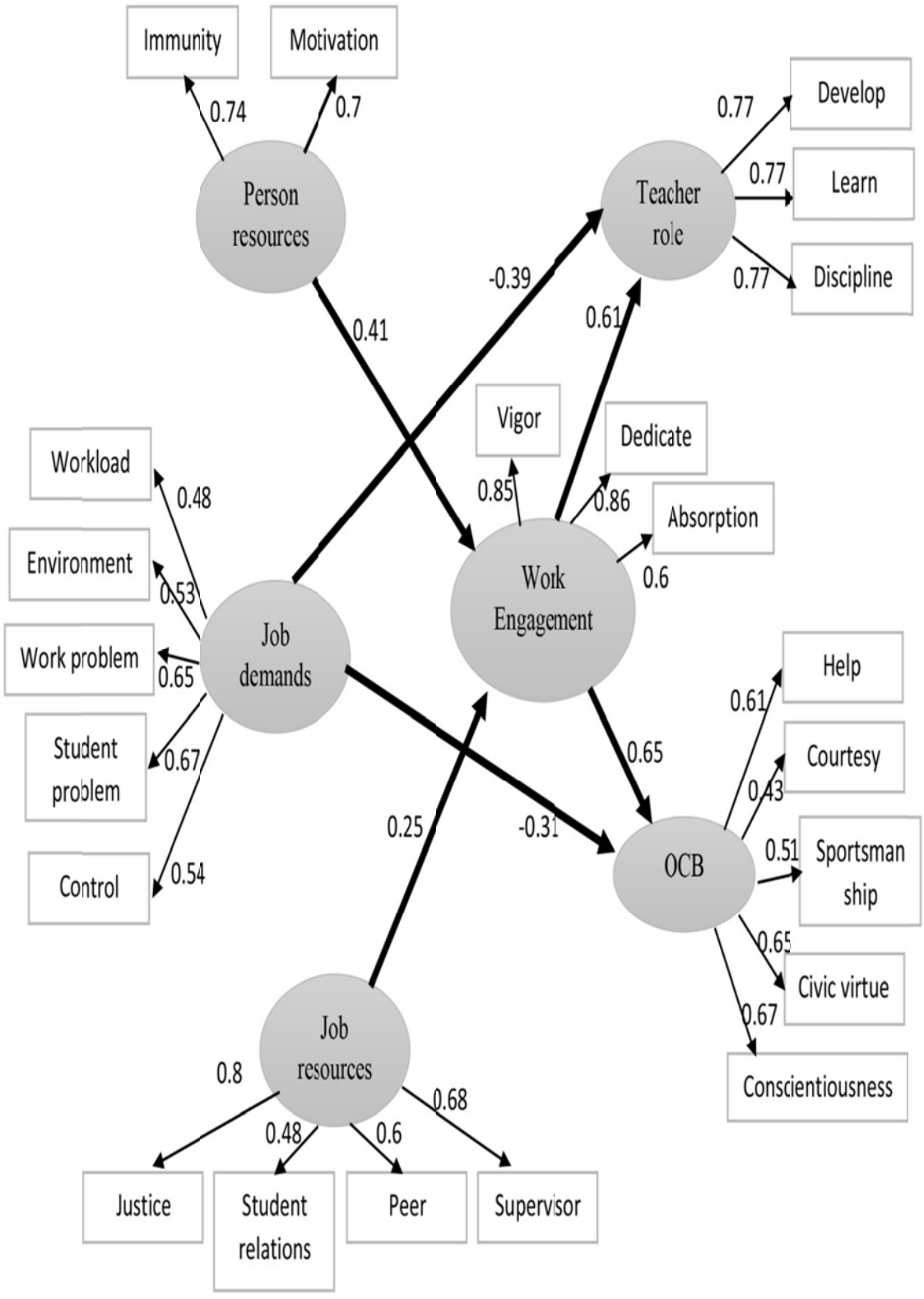
Confirmatory factors analysis (CFA) and structural equation modeling (SEM) employing AMOS program (Arbuckle, 2009) were used to examine both the measurement and structural models. Measures of absolute fit, incremental fit, and parsimonious fit were used to determine how well the data fit the proposed model of teachers' work engagement.

Results

Test of the Causal Relationship Model of Teachers' Work Engagement

The proposed model in Figure 1 was tested using structural equation modeling analyzes. The proposed model did not fit the data ($\chi^2_{(199)}$=1043.560, p=.05) (χ^2/df=5.244, *GFI*=.830, *AGF*=.775, *CFI*=.796, *RMSEA*=.101). As a result, the proposed model was revised based on the theory and modification indices. The insignificant path between job demand and work engagement in the proposed model was deleted and the new paths (i.e., the link between job demands and work behavior). Thus, an alternative (revised) model with standardized path coefficients was tested and is illustrated in Figure 2.

The alternative causal relationship model of teachers' work engagement fitted the empirical data well. Fit statistics of the model were as follows: (χ^2/df=1.549, *GFI*=.947, *AGFI*=.919, *CFI*=.978, *RMSEA*=.036). Results of the alternative model indicated that personal resources (β=.41) and job resources (β=.25) had positively direct effects on work engagement, whereas the direct path from job demands to work engagement was not significant. That is, teachers with high personal resources and high job resources are likely to express high work engagement. Both personal resources and job resources could account for 23 percent of variance in work engagement. In addition, personal resources and job resources also had indirect effects on teacher role behavior and organizational citizenship behavior via work engagement. In other words, work engagement mediates the relationship between personal resources and work behavior (both in-role and extra-role behavior). Similarly, work engagement mediates the effects of job resources on work behavior. The findings also showed that job demands had direct effects on teacher role behavior (β=-.39) and organizational citizenship behavior (β=-.31). That is, teachers with high job demands have low teacher role behavior and low organizational citizenship behavior. The alternative causal relationship model of teachers' work engagement could account for 70 percent of variance in teacher role behavior and 67 percent of variance in organizational citizenship behavior.



χ^2/df=1.549, *GFI*=.947, *AGFI*=.919, *CFI*=.978, *RMSEA*=.036

Figure 2. The Causal Relationship Model of Teachers' Work Engagement.

Discussion

The alternative causal relationship model of teachers' work engagement was supported by the empirical data. Findings of the study suggest that work engagement mediates the relationship between personal-job resources and work behavior. Such mediating effects of work engagement support the model of work engagement (Bakker, 2011) in that personal resources and job resources predict work engagement and work engagement has a positive impact on work performance. The current findings showing work engagement as a mediator between job resources and performance are consonant with previous studies (Hakanen et al., 2006; Rich, Lepine, & Crawford, 2010; Saks, 2006) although research studies have different dimensions of job resources. For example, Hakanen et al. (2006) found that a motivational process in which job resources were important predictors of organizational commitment through work engagement of teachers whereas burnout mediated effects of job demands on ill health (an energetical process). Similarly, job engagement mediated the relationships between the antecedents (i.e., job characteristics and perceived organizational support) and job satisfaction, organizational commitment intention to quit, and organizational citizenship behavior for employees (Saks, 2006). Previous findings showed that job engagement mediated relationships between value congruence, perceived organizational support, and core self-evaluations and the two dimensions of job performance (task performance and organizational citizenship behavior) (Rich et al., 2010). The findings by Rich et al.'s study (2010) imply that both personal and job resources affect job engagement and job performance. Similarly, the current study indicated that personal resources such as psychological immunity and intrinsic motivation had the most positive influence on work engagement. This may be due to psychological immunity is positive psychological characteristics that make individuals mindfulness, self-reliance, hope, resilience, and coping leading to work engagement and work behavior. The current findings also expand the body of knowledge to support the philosophy of sufficiency economy in which psychological immunity facilitates teachers' work engagement and performance. Moreover, psychological immunity has similar constructs of psychological capital, core self- evaluation, self-efficacy, and optimism that affect work engagement (Bakker, 2009).

However, the current study showed that job demands had neither direct effects nor interactive effects (job demands and resources) on work engagement. The findings did not support the JD-R model assuming that job and personal resources have a positive impact on work engagement when job demands are high (Bakker, Demerouti, & Xanthopoulou, 2007). A possible explanation of the findings may be that Thai teachers often encounter high work pressures in their career; consequently, job demands do not affect work engagement. Otherwise, teachers with high levels of personal and job resources may serve as buffers against job demands in decreasing influence of demands on work engagement. Another explanation for the not significant effect of job demands on work engagement may be due to the non-linear relationship between job demands and work engagement. Job demands may have indirect effects on work engagement via psychological states such as burnout and stress as findings by Hakanen et al. (2006). However, in current study, job demands were negatively related to work behavior, in-role and extra-role behavior. The current findings also suggest that highly engaged teachers perform better in both in-role and extra-role behaviors than low engaged teachers. These findings are similar to several previous studies showing that work engagement is positively related to job performance (Bakker, 2009; Rich et al., 2010; Saks, 2006). For example, a study showed that engaged school principals scored higher

on in-role and extra-role performance (Bakker, 2009). In addition, results of a study of 245 firefighters and their supervisors showed that highly engaged firefighters had higher levels of task performance (Rich et al., 2010). More specifically, these findings seem to strongly support the work engagement and performance link.

Implications for Theory and Practices

This study contributes to the application of the causal relationship model of teachers' work engagement in several ways. Firstly, the study has made a contribution to a better understanding of the effects of personal and job resources on work engagement and effectiveness. In other words, the findings of the study provide evidence for how personal and job resources influence work engagement and ultimately affect work effectiveness. Secondly, the findings also suggest important links of work engagement and work effectiveness. Thirdly, the findings provide evidence that job demands have negative impacts on work effectiveness. That is to say, work engagement does not act as mediators or moderators between job demands and work effectiveness.

Several practical implications emerge from the results of this study. First, the findings provide evidence that may lead to formulating policies and guidelines in boosting teachers' work engagement and effectiveness. The enhancement of teachers' work engagement and effectiveness needs to take into consideration, both personal-job resources and job demands. For example, teachers' work engagement is fostered by perceptions of justices, support from colleagues and supervisors, and positive teacher-students relationships. In addition, job demands such as inappropriate physical environment, misbehavior of students, excess workload, and controlling climate should be reduced. Another implication of this research is that teachers' work engagement should be measured in screening teachers who have low levels of work engagement. Thus, non-engaged teachers can be improved by interventions to become engaged teachers. Further, in the selection process at the starting point, personal resources such as psychological immunity and intrinsic motivation could be assessed to select individuals who have high scores on psychological immunity and intrinsic motivation for employment.

Conclusion, Limitations, and Future Research

In conclusion, personal resources and job resources increase both teachers' in-role and extra-role behaviors through work engagement whereas job demands have a negative direct impact on teachers' work behaviors.

However, the study has some limitations that should be addressed in the future research. The first limitation of this study was the use of a cross-sectional design that all studied variables are assessed at the same time so the causal relationship might be problematic. As a result, longitudinal research is needed to examine the causality between work engagement and its antecedents and consequences. Specifically, the longitudinal study could also indicate whether work engagement takes a state perspective that is changeable. In addition, researchers should employ an experimental design to test the effects of intervention programs (i.e., reducing job demands or increasing job resources) on work engagement and effectiveness.

A second limitation is that all the data in the study are based on self-report questionnaires; therefore, mono-method bias could not be ruled out. The mono-method bias is likely to inflate the relationships among studied variables. As a result, future research should be designed to reduce self-reports by using multiple data source. In addition, qualitative methods are needed to provide deeper insight of work engagement process.

References

Arbuckle, J. (2009). *Amos[tm] 18 user's guide*. Chicago, IL: SPSS.

Bakker, A. B., & Bal, P. M. (2010). Weekly work engagement and performance: A study among starting teachers. *Journal of Occupational and Organisational Psychology, 83*, 189-206.

Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the job demands-resources model to predict burnout and performance. *Human Resource Management, 43*, 83-104.

Bakker, A. B., Hakanen, J. J., Demerouti, E., & Xanthopoulou, D. (2007). Job resources boost work engagement particularly when job demand are high. *Journal of Educational Psychology, 99*(2), 274-284.

Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development Internationa*l, *13*(2), 209-223.

Bakker, A. B. (2009). Building engagement in the workplace. In R. J. Burke & C. L. Cooper (Eds.), *The peak performing organization* (pp. 50-72). Oxonian, UK: Routledge.

Bakker, A. B. (2011). An evidence-based model of work engagement. *Current Directions in psychological Science, 20*(4), 265-269.

Choochom, O. (2013). The development of a self-immunity scale. *Journal of Psychology Kasem Bandit University, 3*(3), 52-61.

Choochom, O., Sucaromana, A., & Chuawanlee, W. (1999). *Development of intrinsic motivation scale*. Bangkok, Thailand: Behavioral Science Research Institute.

Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. T*he Journal of School Psychology, 43*, 495-513.

Klassen, R. M., Aldhafri, S., Mansfield, C. F., Purwanto, E., Siu, A. F. Y., Wong, M. W., & Woods-McConney, A. (2012). Teachers' engagement at work: An international validation study. *Journal of Experimental Education, 80*, 317-337.

Office of the Royal Development Projects Board. (2007). *Sufficiency Economy: The philosophy approach to life*. Bangkok: Office of the Royal Development Projects Board.

Rich, B. L., Lepine, J. A., & Crawford, E. R. (2010). Job engagement: Antecedents and effects on job performance. *Academy of Management Journal, 53*(3), 617-635.

Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of Managerial Psychology, 21*(7), 600-619.

Schaufeli, W. B., Salanova, M., Gonzalez-Roma, V., & Bakker, A. B. (2002). The measurement of engagement and burn out: A two-sample confirmatory factor analytic approach. *Journal of Happiness Studies, 3*, 71-93.

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Journal of Educational and Psychological Measurement, 66*(4), 701-716.

Yaakub, M. N. (2015). *Challenges in education towards the realization of ASEAN community 2015*. Retrieved June 29, 2016 from http://www.site.rmutt.ac.th/cpscworkshop/materials/sp.pdf