

A Causal Model of Transformational Leadership and School Environments through Basic Psychological Needs Affecting Teachers' Engagement in Professional Learning in Schools under the Bangkok Metropolitan Administration

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Abstract

The objectives of this quantitative research were: 1) to study transformational leadership and school environments through basic psychological needs affecting teachers' engagement on professional learning in schools under the Bangkok Metropolitan Administration, and 2) to develop and validate consistency of a causal model of transformational leadership and school environments through basic psychological needs affecting teachers' engagement in professional learning in these schools. A sample of 440 teachers was randomly drawn from all teachers in schools under Bangkok Metropolitan Administration in the 2017 academic year. The main method was a questionnaire, constructed by the researchers with overall reliability of .98. The data was analyzed using percentage, mean, standard deviation and structural equation modeling analysis. The main research results obtained for the four variables which are transformational leadership, school environments, basic psychological needs and teachers' engagement in professional learning were: 1) All four variables were overall at a high level ($\bar{X} = 4.17$, S.D. = .78). 2) Developing and validating consistency of the causal model of the four variables fitted very well with the empirical data ($\chi^2 = 77.93$, df = 60, $\chi^2/df = 1.30$, P-value = 0.60, GFI = 0.98, AGFI = 0.94, RMR = 0.02, RMSEA = 0.03).

Keywords: Transformational Leadership, School Environments, Basic Psychological Needs, Teachers' Engagement in Professional Learning

Introduction

Schools manage education by plan and establish policy that can better reflect social aspirations. There should be projects to accelerate the increase of learning achievements to encourage students to effectively learn and to improve their skills. These can only be achieved with plans and policies for teacher development. Teachers' engagement in professional learning (TEPL) is an important factor because continuous professional learning is a fundamental way for teachers to adapt, to change, and to develop teaching skills.

Park, Lim. & Ju (2016) say that TEPL is important and meaningful theme for teacher development. Teachers' professional learning is dependent on self-determined motivation of teaching (Deci & Ryan, 2000a). In the self-determination, Deci & Ryan (2006) distinguish between different reasons that evoke action. Intrinsically motivated action equals any action which is performed for pure enjoyment and satisfaction such as basic psychological needs (BPNs). In comparison, if an action is accomplished for such separable outcomes as transformational leadership (TLE) of the school directors of schools and school environments (SENs), the motivation is extrinsic.

For BPNs, Shuck, Zigarmi & Owen (2014) find that psychological needs, engagement, and work intentions are within the engagement-performance linkage. They explain the latent processes of engagement that underpin the observed relationships of engagement in practice. In addition, Deci & Ryan (2000b) say that TEPL intrinsically motivated behavior satisfies three basic, innate psychological needs. These are autonomy, competence, and relatedness.

Leadership has a key role in TLE into motivational and supportive behaviors. This is continuous learning organization (Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 1999). TLE has been cited for developing and promoting employees (Bass & Avolio, 1995). Therefore, the key factor that leads teachers to participate in activities and commit to teacher professional learning in schools is TLE.

SENs are important indicators of organizational strength. The environment should be friendly and conducive to learning and promoting communication and interaction. Encouragement of feelings is part of self-esteem. Promoting academic learning is a reflection of the school's atmosphere to change and to get the necessary conditions for teaching (Tableman, 2004). The SENs are a supporting factor for BPNs in motivating TEPL (Jansen in de Wal, 2014).

In Thailand, the Ministry of Education used to be and still is a central educational administrative body and has educational management to fulfill the various learning needs, but there are problems regarding the coherence between fiscal and effectiveness of the educational management because of the possible damage which can occur by the centralization of power (Jermsittiparsert, Sriyakul, Pamornmast, Rodboonsong, Boonprong, Sangperm, Pakvichai, Vipaporn and Maneechote, 2016a). With the 1999 National Education Act, some schools have been decentralized to be under local administration bodies. Jermsittiparsert et al. (2016b) find that, in the long run, schools under local administration bodies, trend to be better responded to social needs than those under the Ministry of Education. Schools under the BMA manage education similar to those under local administration bodies. Therefore, these schools are well accepted. However, there still are rooms of improvement through teacher development.

For these reasons, the researcher is interested in studying a causal model of TLE and SENs through BPNs affecting TEPL in schools under the BMA. The results of this research can be used as the knowledge of human resource management. This is a way to elevate teachers' commitment to self-development in higher teacher education. It also encourages teachers to be

professional teachers. As a result, the teachers can manage the quality of continuous and sustainable teaching.

Literature Review

Transformational leadership (TLE) based on five perspectives adapted from the conceptual framework: Attributed charisma (ATCH), Idealized influence (IDIN), Inspirational motives (INMO), Intellectual stimulation (INST), and Individual consideration (INCO).

The concepts of this study are related to TLE. İNCEÇAY & BAKİOĞLU (2010) showed that principals should build a school culture based on learning because it affects TEPL positively. While doing this, teachers should participate in the making decision process. The teachers do not interfere the decisions taken solely by the administration so they will not join voluntarily in the activities and it will not help the process of creating school culture which is learned and considered by important value. The general teachers' training needs are subjects need to be analyzed. The place, time and trainers of in-service training activities should be determined in according to teachers' ideas and these activities should be included as important events in teachers' career planning and they should also be designed according to adult learning principles. Strickland (2010) has investigated the relationship between charismatic leadership, work engagement, and organizational citizenship behaviors reporting that this study adds to understand employee extra-role behavior and workplace energy within the framework of charismatic leadership theory. This study has shown that not only these important findings in the literature, but they also contribute in the field of organizational psychology by adding more evidence to suggest that leadership is associated with improving employee performance through citizenship behaviors. The findings of this study can provide more insight into the possible effects of management; more specifically, managers that exhibit charismatic leadership qualities. Hetland et al. (2011) have reported leadership and fulfillment of the three BPNs at work. This study has showed that the fact that the need of fulfillment is essential for optimal development and psychological health of people, and the finding that it is positively connected to TLE has several implications because the needs are essential, TLE could be a mean of attracting is the best employees and could be a competitive advantage, as people tend to orient toward those situations that allow satisfaction of the needs and be away from those that thwart the needs. An active recruitment of leaders who use IDIN, INMO, INST and INCO could be among the key factors to ensure that followers' needs are found at work. Travaglanti, Babic & Hansez (2016) has explored that the role of work-related needs in the relationship between job crafting, burnout and engagement results are also important for practicing managers. This study has shown that indeed, need-supply fit was related to individual outcomes such as burnout and engagement but also to more organizational outcomes such as organizational commitment, job performance, or intention to stay. These results suggest that managers should also focus on work-related needs fulfillment and not only on demands-abilities fit in order to foster job performance and well-being at work. It may also be feasible to create or develop career paths within the organization and, more specifically, to redirect workers towards jobs that better meet their specific needs. From the literature review can be summarized in the TLE and BPNs have a direct effect on the TEPL and the TLE has an indirect effect on TEPL with BPNs as a mediator variable.

School environments (SENs) based on four perspectives adapted from the conceptual framework: Physical environment (PHEN), Social environment (SOEN), Effective environment (EFEN), and Academic environment (ACEN).

The concepts of this study are related to SENs. Tableman (2004) reflects on the physical and psychological aspects of the schools that are more susceptible to change and provide the preconditions necessary for teaching and learning to take place. These various aspects of SENs do not operate independently for one another. Some examples are following; the PHEN can encourage or discourage social interaction; social interaction facilitates a warm and affective environment; the physical, social and affective environments contribute to, and are impacted by the ACEN; areas for instruction and activities should be appropriate for those uses; a PHEN that is welcoming and conducive to learning; a SOEN that promotes communication and interaction; an affective environment that promotes a sense of belonging and self-esteem; an ACEN that promotes learning and self-fulfillment. Odogwu, Adeyemo, Jimoh & Yewonde (2011) explore research science, mathematics and technology teachers' perception for SENs and Gender differences. This study has shown that the SENs play an important role in teacher and student performance. They undertook research into the assessment of SENs, differences between female and male science teachers' perceptions of their SENs, and associations between these SENs perceptions and teachers' background characteristics. Among the implications are recommendations about administrative policies for improving the SENs for both male and female teachers and about future research on factors associated with teachers' perceptions. From the literature review can be summarized in the SENs and BPNs have a direct effect on the TEPL and the SENs have an indirect effect on TEPL with BPNs as a mediator variable.

Basic psychological needs (BPNs) based on three perspectives adapted from the conceptual framework: Need for autonomy (NAU), Need for competence (NCO), and Need for relatedness (NRE).

The concepts of this study are related to BPNs. Deci & Rayan (1985) studying intrinsic motivation and self-determination in human behavior. The scope of the study is the investigation of people's inherent growth tendencies and innate psychological needs that are the basis for their self-motivation and personality integration, as well as for the conditions that foster those positive processes. Inductively, using the empirical process, they have identified such three needs; the needs for competence, relatedness and autonomy that appear to be essential for an optimal facilitating function of the natural propensities for growth integration, as well as for constructive social development and better personal well-being. From the literature review can be summarized in the BPNs have affected directly on the TEPL.

Teachers' engagement in professional learning (TEPL) based on six perspectives adapted from the conceptual framework: Reading (Reading), Work related training (WRT), Experimenting (EXP), Reflecting (REF), Collaborating: lesson (COLL), and Collaborating: school (COLS).

The concepts of this study are related to TEPL. Jansen in de Wal (2014) has researched the TEPL by exploring motivational profiles. This study has shown that teachers experience multiple dimensions of motivation engage in professional learning activities. This becomes especially appear when engagement in teacher professional learning activities is compared across motivational profiles. Furthermore, a specific motivational profile is related to teachers' BPNs satisfaction. Based on previous research demonstrating a causal relationship between basic need satisfaction and motivation, this calls for interventions that will make school environments more supportive. Tableman (2004) reflects on the physical and psychological aspects of the schools that are to change and that provide the preconditions necessary for teaching and learning to take place. Kraft & Papay (2014) have sought to document heterogeneity in the returns to teaching experience and to examine whether this heterogeneity can be explained, in part, by the professional environment in which teachers work. We find strong evidence of such

heterogeneity, establishing that there is not only substantial variation in teacher effectiveness but also in the pace at which teachers improve their effectiveness. Some teachers are improving two or three times faster than others and continue these rapid gains in effectiveness throughout their first 5 to 10 years on the job. This large variation in returns to experience across teachers has important implications for research. From the literature review can be summarized in the BPNs and SENs have a direct effect on the TEPL.

Conceptual framework was built based on previous research that had been reviewed. Then it is predicted in the current paper that TLE and SENs through BPNs are affecting TEPL.

The considerations from the literature review can be summarized in a path model that it will guide our analysis (see Figure 1).

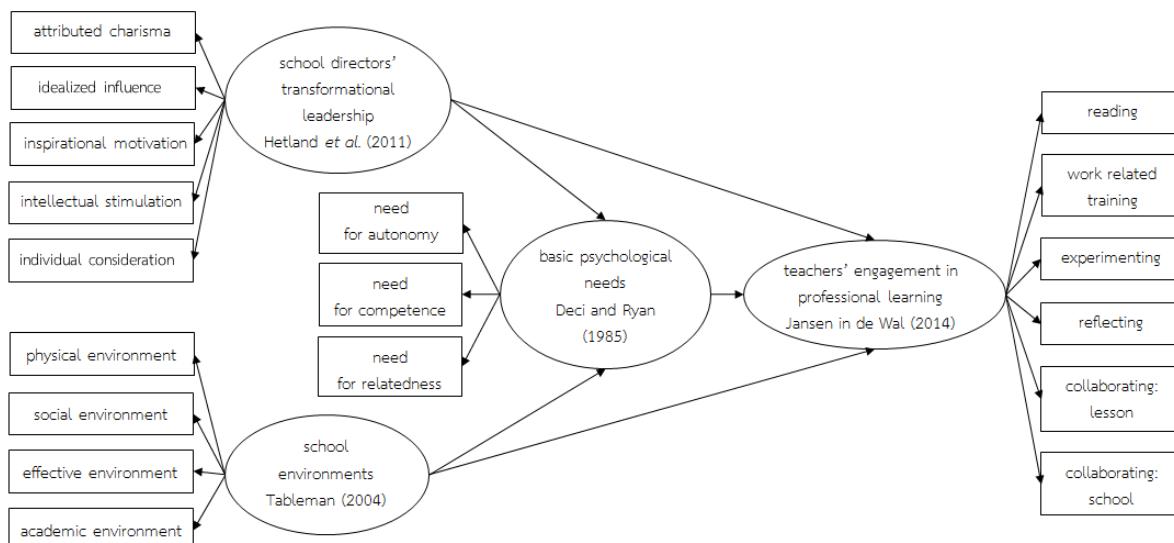


Figure 1 Theoretical framework's four latent variables and 18 observable variables

Hypothesis

The hypotheses of this study are that

- 1) TLE, SENs, BPNs, and TEPL have correlations to the relationship of hypotheses across variables.
- 2) TLE and SENs have a direct influence on BPNs.
- 3) TLE, SENs and BPNs have a direct influence on the TEPL.
- 4) TLE and SENs have an indirect effect on the TEPL with BPNs as a mediator variable.
- 5) The causal model of TLE and SENs through BPNs affecting TEPL in schools under BMA is consistent with empirical data.

Methodology

Sampling: This study was conducted using a descriptive survey as its methodology. The population was 14,158 teachers of 437 schools under the BMA in the school year 2017. The sample consisted of the formula which was ten to twenty per one parameter. There are 22 variables. The data was collected from 440 teachers in 437 schools selected by multi-stage random sampling.

Data Collection: The tool was a questionnaire consisting of items based on a 5-point rating scale was constructed with overall reliability of 0.977. The questionnaire consisted of 75 questions divided into four sections: 23 questions measuring TLE of school directors, 22 questions measuring school

environments, 10 questions measuring BPNs, and 20 questions measuring TEPL. Cronbach's Alpha coefficient was used to test the reliability of the tool and the reliability coefficients were as follows: TLE of school directors: 0.951, SENs: 0.947, BPNs: 0.824, and TEPL: 0.959. The data was collected by mail during 10 weeks since March 16th, 2018 until May 10th, 2018. The obtained data from the questionnaire were analyzed using percentage, mean, standard deviation. Hypothesis testing was also conducted through SEM using the LISREL software package.

Research Results

Overall, the BPNs were the highest mean of latent variables but the TLE was the lowest mean of latent variables. BPNs were averagely between 4.19 and 4.41. The NRE was the highest mean of observed variable within BPNs. The NAU was the lowest mean of observed variable within BPNs. TLE was averagely between 3.95 and 4.18. The IDIN was the highest mean of observed variable within TLE but the INCO was the lowest mean of observed variable within TLE. SENs were averagely between 4.16 and 4.25. The ACEN was the highest mean of observed variable within SENs but the SOEN was the lowest mean of observed variable within SENs. TEPL was averagely between 4.19 and 4.31. The reading was the highest mean of observed variable within TEPL but the COLL was the lowest mean of observed variable within TEPL.

The correlation coefficients of 18 variables were during 0.327-0.904 and statistical significance of 0.01. The INMO and the INST were the most two correlated variables but the ATCH and PHEN were the least two correlated variables.

Table 1 Correlation coefficient between observed variables in the research.

Variable	NAU	NCO	NRE	Reading	WRT	EXP	REF	COLL	COLS	ATCH	IDIN	INMO	INST	INCO	PHEN	SOEN	Efen	ACEN
NAU	1																	
NCO	.693**	1																
NRE	.576**	.631**	1															
Reading	.571**	.616**	.632**	1														
WRT	.585**	.637**	.576**	.802**	1													
EXP	.622**	.634**	.567**	.768**	.813**	1												
REF	.528**	.595**	.560**	.751**	.706**	.801**	1											
COLL	.522**	.503**	.462**	.580**	.616**	.684**	.717**	1										
COLS	.612**	.569**	.461**	.562**	.633**	.678**	.696**	.761**	1									
ATCH	.614**	.464**	.350**	.405**	.435**	.499**	.451**	.421**	.468**	1								
IDIN	.619**	.471**	.361**	.391**	.429**	.473**	.436**	.399**	.467**	.885**	1							
INMO	.650**	.476**	.346**	.390**	.452**	.496**	.454**	.468**	.516**	.877**	.894**	1						
INST	.643**	.483**	.381**	.438**	.501**	.525**	.490**	.455**	.535**	.846**	.859**	.904**	1					
INCO	.666**	.455**	.330**	.365**	.419**	.477**	.416**	.437**	.482**	.845**	.846**	.890**	.877**	1				
PHEN	.450**	.387**	.365**	.431**	.444**	.469**	.424**	.370**	.455**	.327**	.383**	.386**	.411**	.359**	1			
SOEN	.711**	.489**	.452**	.501**	.536**	.574**	.534**	.552**	.578**	.709**	.714**	.778**	.773**	.764**	.512**	1		
Efen	.731**	.515**	.414**	.471**	.531**	.567**	.495**	.516**	.566**	.744**	.766**	.807**	.773**	.802**	.453**	.877**	1	
ACEN	.730**	.603**	.537**	.576**	.623**	.664**	.600**	.586**	.645**	.704**	.722**	.748**	.757**	.732**	.517**	.839**	.844**	1
Mean	4.19	4.28	4.42	4.31	4.27	4.22	4.25	4.19	4.21	4.05	4.18	4.08	4.04	3.95	4.24	4.15	4.15	4.25

*Correlation is significant at the .05 level (2-tailed).

** Correlation is significant at the .01 level (2-tailed).

A causal model of TLE and SENs through BPNs affecting TEPL in schools under the BMA produced results that fit the empirical data with the fit indices being: $\chi^2 = 77.93$, $df = 60$, $\chi^2/df = 1.30$, $P\text{-value} = 0.60$, $GFI = 0.98$, $AGFI = 0.94$, $RMR = 0.02$, $RMSEA = 0.03$

Based on a joint variance test, it was discovered that the independent variables in the causal model explained 84 % of the variance in the causal model of TLE and SENs through BPNs affecting TEPL in schools under the BMA and all the study's research hypotheses were

supported. The SEM showing the causal relationships between the variables is shown below in Figure 2.

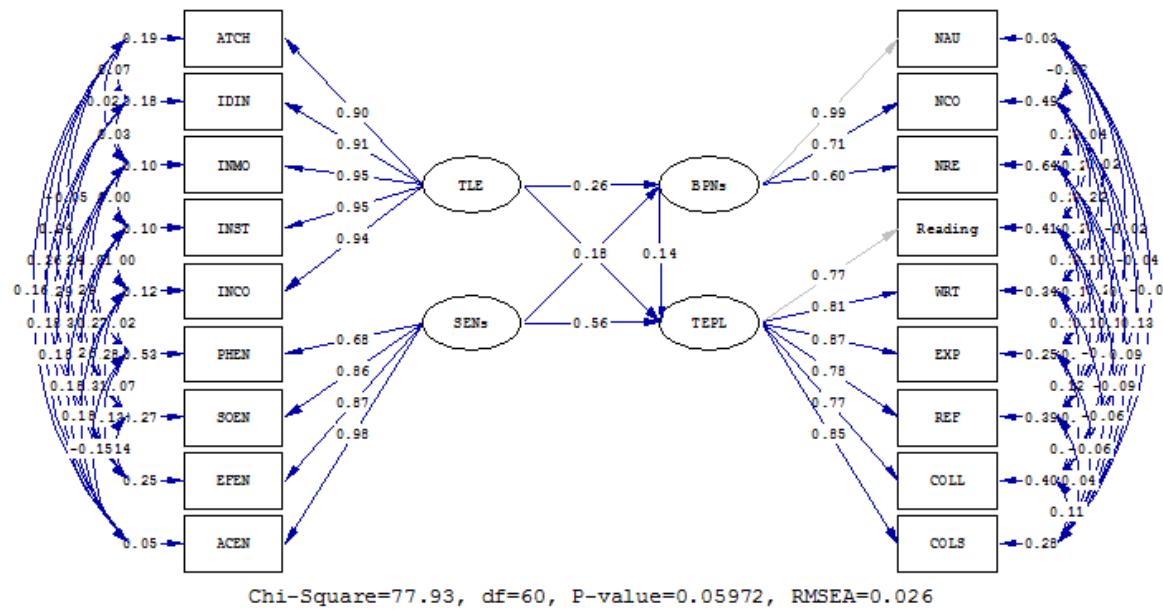


Figure 2 Adjusted structural equation model

Discussion

1) The study of TLE, SENs, BPNs and TEPL showed that: BPNs, consisting of NAU, NCO, and NRE were overall rated at high level. It was ranked at the top of the four latent variables. This has shown that types of motivation based on different reasons or goals gave rise to an action. According to Deci & Ryan (2000b) the quality of experience and performance can be very different when one is behaving for intrinsic versus extrinsic reasons. However, teachers in schools under BMA have fixed main duties and assigned responsibilities. Jobs that have less or more number, are successful by all teachers have got to meet their own needs. Murray (1938) also mentioned that the need for autonomy is the need to accomplish difficult tasks, overcoming obstacles and achieving expertise, to break free from constraints, resisting coercion and dominating authority and to be irresponsible and independent. NAU, NCO, and NRE, these psychological needs are essential for humans to thrive, and maladjustments occur in contexts where these needs get thwarted. The need for autonomy is a psychological need to feel a sense of freedom and have the opportunity to choose and make decisions. The need for relatedness means a desire to be respected, connected, and cared for by others in a person's life. The NCO is described as a feeling to be efficacious and effective in various tasks that need to be accomplished.

2) The investigation of this study consisted with the empirical data of the causal model of TLE and SENs through BPNs affecting TEPL in schools under the BMA found that: TLE and SENs influenced directly on BPNs at the statistical significance of 0.05. According to Jansen in de Wal (2014) studied TEPL and found motivational profiles what extent teachers are motivated to work on their professional learning, to this end, profiles of motivational dimensions were related to

their autonomy, competence, and relatedness satisfaction, and engagement in professional development. Moreover, teachers' having profiles that had higher manifestations of identified regulation and intrinsic motivation engaged more in professional development activities. Travaglanti et al. (2016) indicated that commitment to work. It should be encouraged the group behaviour and specific needs. Considering the need to have a good working relationship is more specific by use TLE and SENs have demand, Relational relationships with others demand for independence in decision making and the demand is a capable person and consistent with the elements of human well-being with an emphasis on the contribution of ecosystem services described as between physical, mental and ecological services, if physical and mental health were linked to quality of life and the relationship between physical health or increased mind and ecosystem services. Indicates have direct influence on human well-being (Hetland et al., 2011), (Summers, 2012). As TLE and SENs had the impact of school directors' TPL style on school learning environments and selected teacher outcomes: to change the condition of the teacher in response to the changing needs of school director by promoting educational restructuring and innovation. Focus on creating vision and promote a commitment to work and the role of teachers as leaders (Barnett, 2003).

Conclusions and Recommendations

- 1) For TEPL and TLE, it was found that reading and individual consideration have a minimal size of relationship, at low level. School directors should encourage reading to the teachers in particular literatures and research in learning management. The school directors can apply the SQP2RS strategy. This strategy has systematic thinking and implicating of experience in the work associated with knowledge in the subject read. It can then be followed by asking questions, finding answers, examining and summarizing their own understanding. It encourages teachers to learn a variety of teaching. This is a way to develop intellect and make progress in the teachers' profession. All teachers can then be qualified and successful professionals.
- 2) TLE and SENs have an indirect effect on TEPL with BPNs as a mediator variable at the statistical significance of 0.05. School directors' TLE and SENs had direct influence to change the conditions of the teachers in response to the changing needs of school directors by promoting educational restructuring and innovation. Focusing on creating vision and promoting a commitment to work and the role of teachers as leaders, the teachers are then made aware of their roles. Conditions bounding to external factors should not be placed. Instead, strive to learn and develop their profession by making their own decisions with ability and relationship that internal factors can overcome their own BPNs. TEPL was related to their autonomy, competence, and relatedness satisfaction. Teachers' BPNs should specially be encouraged.

References

Barnett, A. 2003. **The Impact of transformational leadership style of the school principal on school learning environments and selected teacher outcomes: A Preliminary Report.** (A paper presented at NZARE AARE, Auckland, New Zealand, November 2003).

Bass, B. 1985. "Leadership: good, better, best." **Organizational Dynamics** 13 (3): 26-40.

_____ & Avolio, B. 1995. **Transformational Leadership Development: Manual for the Multifactor Leadership Questionnaire.** California: Consulting Psychologists Press.

Darling-Hammond, L., Wei, R., Andree, A., Richardson, N., & Orphanos, S. 2009. **Professional Learning in the Learning Profession: A Status Report on Teacher Development in the United States and Abroad.** Texas: National Staff Development Council.

Deci, E. & Ryan, R. 1985. **Intrinsic motivation and self-determination in human behavior.** New York: Plenum Press.

_____. 2000a. "Intrinsic and extrinsic motivation: classic definitions and new directions." **Contemporary Educational Psychology** 25 (1): 54-67.

_____. 2000b. "Self-determination theory and the facilitation of intrinsic motivation, social development and well-being." **American Psychologist** 55 (1): 68-78.

_____. 2006. "Self-regulation and the problem of human autonomy: Does psychology need choice, self-determination, and will?." **Journal of Personality** 74 (6): 1557-1558.

Gorozidis, G., & Papaioannou, A. 2014. "Teachers' motivation to participate in training and to implement innovations." **Teaching and Teacher Education** 39: 1-11.

Hetland, H., Andreassen, C., Pallesen, S., & Notelaers, G. 2011. "Leadership and fulfillment of the three basic psychological needs at work." **Career Development International** 6 (5): 507-523.

İnceçay, V., & Bakioğlu, A. 2010. "Investigating Factors Affecting Teachers' Professional Learning." **The International Journal of Educational Researchers** 2 (2): 14-21.

Jansen in de Wal, J. 2014. "Teachers' engagement in professional learning: Exploring motivational Profiles." **Learning and Individual Differences** 36: 27-36.

Jermsittiparsert, K., Sriyakul, T., Pamornmast, C., Rodboonsong, S., Boonprong, W., Sangperm, N., Pakvichai, V., Vipaporn, T., & Maneechote, K. 2016a. "A Comparative Study of the Efficiency and the Effectiveness of Primary Education Management between the Provincial Administrative Organization and the Office of the Basic Education Commission: A Service User Satisfaction Survey." **Modern Applied Science** 10 (7): 58-65.

_____. 2016b. "A Comparative Study of the Administration of Primary Education between the Provincial Administration Organization and the Office of the Basic Education Commission in Thailand." **The Social Sciences** 11 (21): 5104-5110.

Kraft, M. & Papay, J. 2014. "Can Professional Environments in Schools Promote Teacher Development? Explaining Heterogeneity in Returns to Teaching Experience." **Educ Eval Policy Anal** 36 (4): 476-500.

Murray, H. 1938. **Explorations in personality.** New York: Oxford University Press.

Odogwu, H., Adeyemo, S., Jimoh, J., & Yewonde, R. 2011. "Science, mathematics and technology teachers' perception of school environment Gender differences." **Multicultural Education & Technology Journal** 5 (4): 274- 287.

Park, C., Lim D., & Ju B. 2016. "Transformational Leadership and Teacher Engagement in an International Context." in **Handbook of research on global issues in next-generation teacher education.** Pennsylvania: Information Science Reference., pp. 22-42.

Shuck, B., Zigarmi, D., & Owen, J. 2014. "Psychological needs, engagement, and work intentions A Bayesian multi-measurement mediation approach and implications for HRD." **European Journal of Training and Development** 39 (1): 2-21.

Strickland, O. & Babcock-Roberson, M. 2010. "The relationship between leader charisma, work engagement, and turnover intentions." **The Journal of Psychology** 144 (3): 313-326.

Summers, J., Smith, L., Case, J., & Linthurst, R. 2012. "A Review of the Elements of Human Well-Being with an Emphasis on the Contribution of Ecosystem Services." **AMBIO** 41 (4): 327-340.

Tableman, B. 2004. "School climate and learning." **Best Practice Beliefs** 31: 1-10.

Travaglianti, F., Babic, A., & Hansez, I. 2016. "The role of work-related needs in the relationship between job crafting, burnout and engagement." **SA Journal of Industrial Psychology** 42 (1): 1-13.