



A Professional Development Model for Educational Innovators of School Principals under the Office of the Basic Education Commission in Thailand

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Abstract

This paper aimed to study the components of educational innovators of school principals and to develop a professional development model for educational innovators of school principals under the Office of the Basic Education Commission in Thailand. The research method used to study the components and develop an educational innovation development model of school principals from a group of 8 experts and a group of 1,130 school principals and teachers in schools in the innovation area. The constructed model was evaluated by 6 experts and 8 school principals. Tools used to collect both quantitative and qualitative data were an interview form, a questionnaire with the reliability coefficients of .984 and .990, and a focus group discussion form. Data were analyzed using mean, standard deviation, factor analysis for quantitative data, and content analysis for qualitative data. The results showed that the components of educational innovators of school principals consisted of personal characteristics, potential development, and innovation management. The development model consisted of principles and objectives, components to be developed, development process, performance appraisal, and success factors in implementing the model. The results of the assessment of the model for educational innovators were at a high level. This research presents the development of educational innovators of school principals with a systematic model derived from comprehensive research and a national perspective.

Keywords: Development Model, Educational Innovator, School Principal

Introduction

Over the past decades, innovation has become the most significant factor for the organization to achieve its competitive advantage. Innovation has a development path that goes hand in hand with development and global social change (Diamond, 1997). However, it has led to an era of confusion and uncertainty, all of which are the driving force for the paradigm shift (Kunh, 1962). The advancement of technology and innovation has caused global changes in many areas, such as economic, social, and other aspects, that lead to adjustments to achieve competitiveness amidst globalization. The rapid increase in information technology development causes countries to adapt and develop domestic agencies to continuously increase their competitiveness (Shafritz & Ott, 2001). Thailand has placed importance on increasing competitiveness both at the national level and at organizational levels. It has formulated a policy to focus on innovations and has planned systematically to lead the country to become a leader country of innovation. It aimed to solve crisis situations and to create sustainability in national development. This is consistent with the 20-Year National Strategy (2016-2036), which aims to develop graduates with the ability to be a thinker and to create innovations in response to the needs of the country and industrial markets (Ruchiwit et al., 2019).

Education is an important foundation for the development of Thailand's capabilities. Thus, educational organizations and agencies need to keep up with changes and realize the importance of producing innovations for the organization, especially schools under the Office of the Basic Education Commission, located in 30,112 sites (Office of the Basic Education Commission, 2018) in charge of providing education at the basic level from early childhood to the high school level. The Office of the Basic Education Commission has a mission to organize and promote basic education to develop students' academic achievement and abilities emphasizing on students' ability to think critically and create innovations. Educational development has been reported successful in many aspects. However, the status quo is no longer considered strong enough for Thai schools to stand out and succeed because of students' demands, technology changes, and stakeholders' expectations. Thai students are still performing below the international average in core subjects. The performance of junior secondary school students in the national examinations has declined, especially in mathematics and science. While the performance of senior secondary school students has improved slightly over the same period, the mean results for core subjects were less than 50 percent (Durongkaverroj, 2022). Information from Statista Research Department (2022) reported that in 2020, results from the national testing service in Thailand showed that students who were in grade 12 scored an average of around 26 percent in mathematics, with a downward trend in numeracy scores in recent years. Also, English proficiency, scored an average

of 29.9 percent, which had slightly increased compared to the previous year, but still below the international average. It cannot deny that those who play an important role in school administration and can transform the organization into a school of innovation are school principals, who must have the potential to be educational innovators. School principals need to lead the management process to create an innovative context to drive personnel to teach efficiently to drive students to generate innovations. The development of educational innovators of school principals will enable their potential as educational innovators. Accordingly, the related agency need to organize a system for building school principals' capacity for innovative sustainability management (Gliddon, 2006; Suttawat & Chantuk, 2016)

Therefore, studying the components of educational innovations, and proposing an educational innovator development model for school principals under the Office of the Basic Education Commission, is necessary. The results of the study will benefit the administration and development of school innovations, including the policy agency who can use the educational innovator development model, to enhance school principals to develop their potential as educational innovators, which will affect the overall quality of school development.

Research objectives

1. To study the components of educational innovators of school principals under the Office of the Basic Education Commission in Thailand
2. To develop a professional development model for educational innovators of school principals under the Office of the Basic Education Commission in Thailand

Research conceptual framework

This research synthesizes components related to the educational innovator skills and characteristics of school principals. It found important variables as follows.

1) *Personal characteristics aspect* consisted of the ability to understand the context and approach complex problems or opportunities, the ability to clearly communicate, the courage to take risks and come up with new ideas, the ability to manage himself, having imagination, and perseverance in the face of problems that arise (Landrum, 1991; Clayton, 1997; Gliddon, 2006; Clark, 2009; Dyer et al., 2011; Weiss & Legrand, 2011; Overstreet et al., 2013; Furr et al., 2014; Tumtool, 2014; Khalili, 2017; Bagley, 2019; Baumgartner, 2019).

2) *The potential development aspect* consisted of developing with innovative methods focused on real practice, development using job supervision and coaching, development to create a network of

cooperation, and reflection on potential development results (Dotlich & Noel, 1998; Darling-Hammond et al., 2007; DuBrin, 2010; Velsor et al., 2010; OECD, 2012; Songkram, 2013; The Department of Defense Education Activity, 2014; Harvard Business Publishing Corporate Learning, 2018; Horoszowski, 2018).

3) *Innovation management aspect* consisted of supporting resources and methods for participants to invent new things, building teamwork and participation, developing essential skills and abilities for the team, determining the direction of the organization with innovative strategies, motivating and inspiring personnel, creating of an organizational culture that emphasizes innovation, reflections on performance appraisals, and creating an atmosphere for innovation (Van de Ven & Chu, 1989; Clayton, 1997; Gliddon, 2006; Clark, 2009; Chaiprasit, 2010; Porter & Malloch, 2010; Buachu, 2011; Horth, 2014; Tumtool, 2014; Ghosh, 2015; Khalili, 2017; Pangthai, 2017; Bagley, 2019).

For the study of variables related to the educational innovators of school principals, the important variables were found, including the developing visions and working strategies that emphasize innovation in schools, setting goals and implementing activities, using the experience and expertise of school principals, leading and developing personnel in schools, focusing on teamwork, working with educational networks, accepting comments and suggestions for improvement, and monitoring performance (Swart, 2013).

Figure 1 showed a research framework that will be followed in this study.

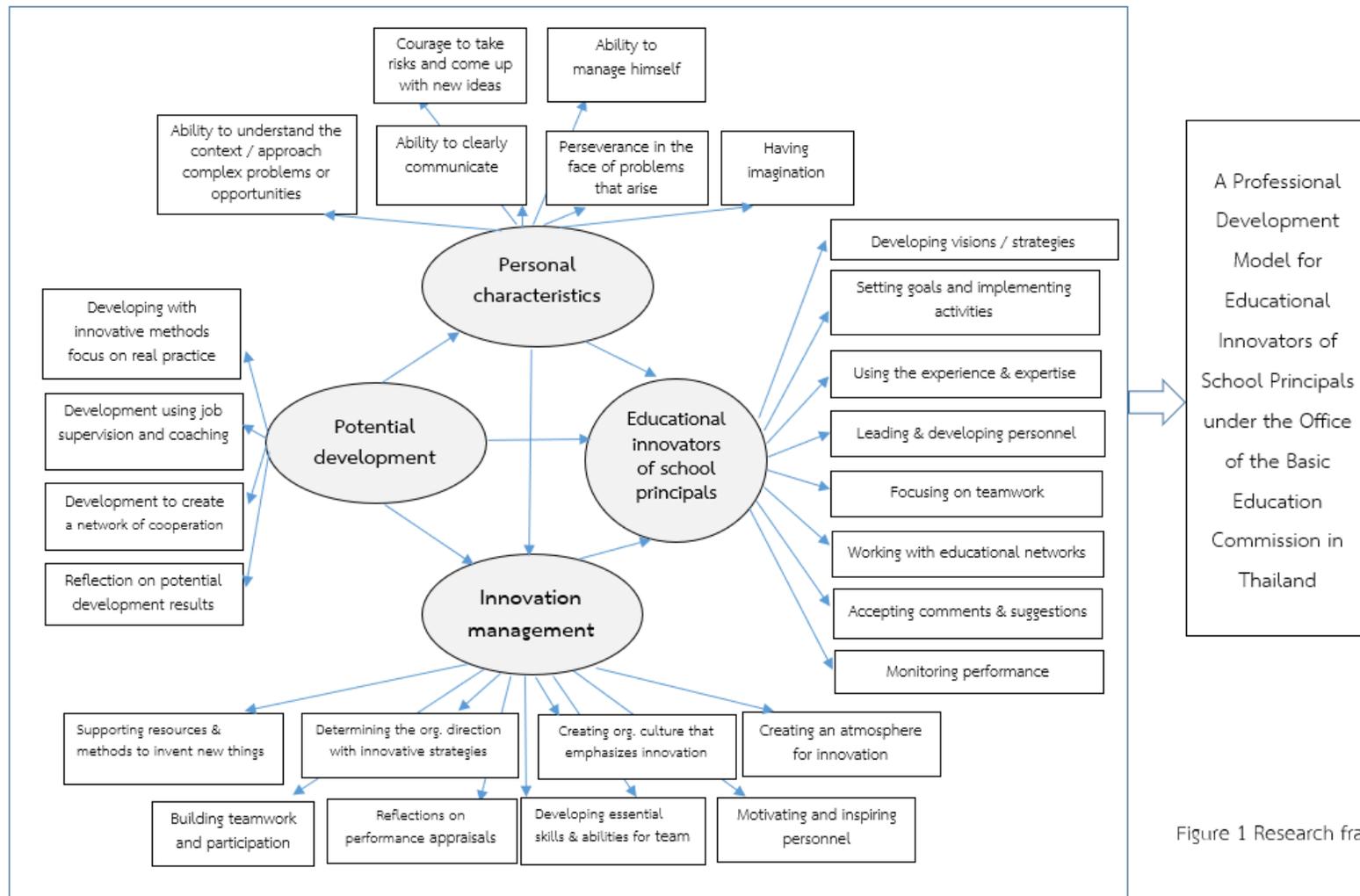


Figure 1 Research framework

Research methodology

This mixed-method research was divided into 2 phases as follows.

The first phase was to study the components of educational innovators of school principals by studying relevant documents and research, interviewing 8 experts and school principals, gathering data from questionnaire from informants in 226 schools which located in the educational innovation area. The informants for each school were a school principal and 4 teachers, totaling 1,130 informants. The tools used in the phase were document analysis forms, a semi-structured interview form and a questionnaire with an IOC between 0.60-1.00 and reliability of 0.984 and 0.990. The statistics used for the quantitative data analysis were mean, standard deviation, and factor analysis, while qualitative data was analyzed with content analysis.

The second phase was to develop the educational innovator development model for school principals using focus group discussions with 6 experts and 8 school principals to develop the proposed model, then evaluating the model by 5 experts. The tools used in the phase were a focus group discussion form and the model evaluation form with an IOC between 0.60-1.00. Quantitative statistical data were analyzed by mean, standard deviation, while qualitative data were analyzed by content analysis.

Results

The research findings were as follows.

1. The overall of compliance with components of educational innovator of school principals was rated at the high level ($M = 4.11$), and the innovation management aspect was rated at the highest average ($M = 4.16$), followed by the personal attribute aspect ($M = 4.12$), and the competency development aspect ($M = 4.10$), respectively. When considering each component, it was found that 1.1) the average opinion level towards the personal attribute aspect was at the high level. The sub-component of the ability to clearly communicate was at the highest average ($M = 4.22$); 1.2) the average opinion level towards the potential development aspect was at the high level. The sub-component of the development using job supervision and coaching was at the highest average ($M = 4.22$); and 1.3) the average opinion level towards the innovation management aspect was at the high level. The sub-component of teamwork and participation was at the highest average ($M = 4.28$).

2. The overall educational innovators level of the school principals was rated at the high level ($M = 4.20$), and the monitoring performance aspect was rated at the highest average ($M = 4.20$), followed by accepting comments and suggestions for improvement ($M = 4.16$), working with educational networks

($M = 4.16$), developing personnel in schools ($M = 4.14$), developing visions and working strategies that emphasize innovation in schools ($M = 4.13$), setting goals and implementing activities ($M = 4.11$), focusing on teamwork ($M = 4.08$), and using the experience and expertise of school principals ($M = 4.03$), respectively. When considering each component, it was found that developing personnel using group activities such as brainstorming, group discussions, and school principals use the information gained from monitoring as an opportunity further develop new innovations had the highest average ($M = 4.22$).

3. The results of verifying the consistency of the confirmatory component model in educational innovation with empirical data are as follows.

1) The results of the analysis of the distribution characteristics of the variables to examine the preliminary terms of statistics to be used analytically to answer research questions using the coefficients of skewness and kurtosis, it was found that every component of educational innovation was skewed ranged from -0.345 to -0.694 and had a kurtosis between -0.441 to 0.268 , which satisfies the specified criteria. Therefore, all variables are normally distributed.

2) The results of the analysis of the consistency of the model confirming educational innovation with empirical data revealed that the educational innovator component was measured from 8 observed variables. The results of the analysis of the correlation coefficient between the observed variables found that every variable had a statistically significant positive correlation coefficient at the 0.01 level and had moderate to high correlation. When considering the results of the model consistency test, the confirmatory component of educational innovator, which was considered from the goodness of fit index, chi square = 12.847, $df = 12$, $p = 0.380$, $CMIN/df = 1.071$, GFI index = 0.983, AGFI index = 0.948. CFI Index = 1.000 and RMSEA Index = 0.020 which all values passed according to the specified criteria. It means that the affirmative component model of educational innovator is consistent with the empirical data and is consistent with the hypothesis. When considering the component weights of all variables, it was found that the component weights were positive, between 0.869 to 0.953 with statistical significance at the 0.01 level for all items and there were variations with educational innovator components between 75.60 to 90.80 percent ($R^2 = 0.756-0.980$), where the GOA variable had the highest component weight ($\beta = 0.953$).

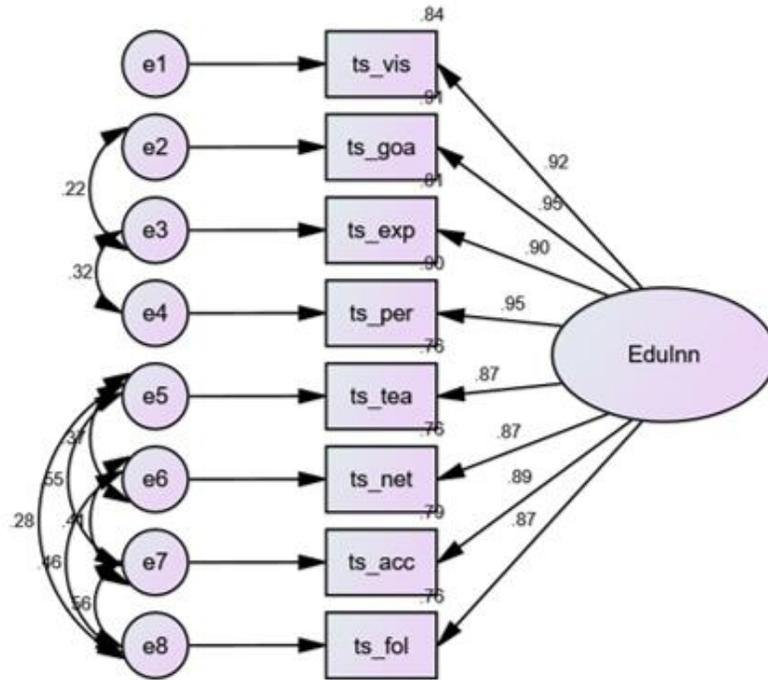


Figure 2 Results of the confirmatory factor analysis on educational innovators

4. The results of the development of a model for educational innovators of school principals found that the model consisted of

1) *Principles and objectives*: Educational innovation of school principals is the ability to express the characteristics of leaders who have competence, personality, roles, and the ability to approach complex problems or opportunities the ability to discover new methods of action, emphasizing the relationship of a group of qualified personnel and have the trust of members within the organization, including using the process of creating an innovation context to drive personnel to create innovations to add value to the organization and the nation in the long term. This positively effects on continuously increasing the competitiveness of the organization and the nation. Therefore, to develop school principals under the Office of the Basic Education Commission to have the potential to be an educational innovator, there must be an educational innovator development model in order to apply the results obtained according to the development model to provide benefit to the administration and development of school administration innovations which will affect the overall quality of schools.

The model has three important objectives: 1) to develop personal characteristics of school principals to become educational innovators; 2) to develop the potential development of school

principals to become educational innovators, and 3) to develop innovation management of school principals to become educational innovators.

2) *Components to be developed*: there are consisting of 1) personal characteristics, namely, 1.1) the ability to understand the context and approach complex problems or opportunities, 1.2) the ability to clearly communicate, 1.3) the courage to take risks and come up with new ideas, 1.4) having imagination, and 1.5) perseverance in the face of problems that arise; 2) potential development, namely, 2.1) developing with innovative methods focus on real practice, 2.2) development using job supervision and coaching, 2.3 development to create a network of cooperation, and 2.4) reflection on potential development results; and 3) Innovation management, namely, 3.1) supporting resources and methods for participants to invent new things, 3.2) teamwork and participation, 3.3) development of skills and abilities for the team, 3.4) determining the direction of the organization with innovative strategies, 3.5) motivating and inspiring personnel, 3.6) creation of an organizational culture that emphasizes innovation, 3.7) reflections on performance appraisals, and 3.8) creating an atmosphere for innovation.

3) *Development process*:

3.1) Formulate specific policies

3.2) Setting human resource development system: It involves 1) determining the focus clearly on innovation potential development, 2) determining the system of development into 2 sub-systems, self-developing system and the development system through the agency, 3) maintaining a balance between new types of development that will occur with the existing organizational culture, 4) giving importance to external factors, 5) linking the human resource development system with other tasks of the organization, 6) creating a linkage mechanism between the human resource development tasks, and 7) developing a mechanism for development evaluation.

3.3) Design curriculum development: It consist of 1) quality standards, 2) quality control and evaluation, 3) process review 4) qualified and diverse curriculum team, 5) personnel training.

3.4) Setting development process: It includes the process of 1) necessity analysis, 2) process design, 3) implementation, and 4) evaluation

3.5) Allocate Resources

3.6) Select development method

3.7) Setting monitoring and evaluation that reflect knowledge and skills which can be applied in practice.

4) *Evaluation*: Evaluation of the performance including 1) artificial evaluation (Pseudo-evaluation) and 2) formal evaluation by using the evaluation criteria covering 6 issues together,

effectiveness criteria, the criteria that emphasize efficiency, the criteria for adequacy, the criteria for equity, the criteria for satisfying needs or responsiveness, and the criteria for appropriate.

The process from setting policies to monitoring and evaluation is necessary to bring research and development to play an important role so that the aforementioned process can affect the components of educational innovation in terms of personal characteristics, potential development, and innovation management of school principals as a whole. The model was shown in Figure 3.

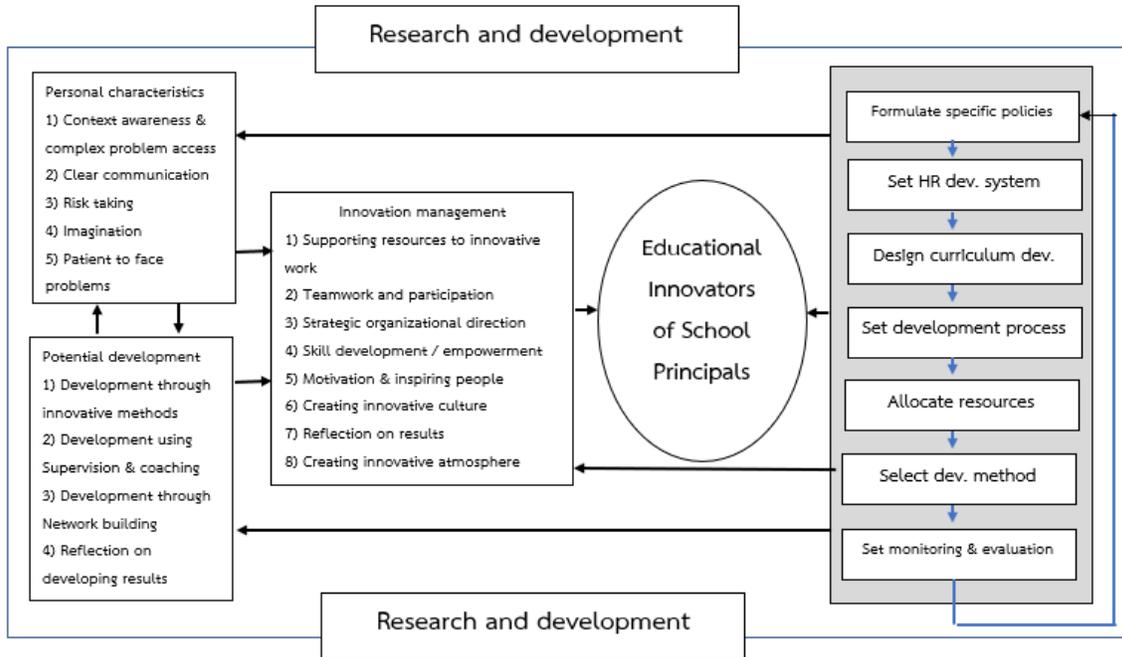


Figure 3 A professional development model for educational innovators of school principals under the Office of the Basic Education Commission in Thailand

5) Success factors in implementing the development model: The government have to formulate specific policies for the development of educational innovators of school principals. The policy-level agencies have to play the important role in transforming specific policies for the development of educational innovator of school principals into practice, and establish human resource development systems for development, as well as set mechanisms to link between human resource development missions, curriculum design, development process, resources, selection of development methods, and monitoring and evaluation system. Moreover, they have to supervise, mentor, and enhance to promote educational innovator of school principals on a regular basis.

5. The results of the examination and evaluation of the educational innovator development model found that the overall of ideas on the model were at the high level and In terms of accuracy

aspect was rated at the highest level followed by the utility aspect, suitability aspect, and possibilities, respectively.

Discussion

1. The research findings revealed that all variables in the innovation management aspect was rated at the highest average followed by the personal attribute aspect and the competency development aspect, respectively. The results also showed that the average level of practice in the sub-components of innovation management by teamwork and participation was the most consistent with the average level of practice in each area that found the encouraging for teamwork bonding was at the highest average, followed by the opportunity for everyone to participate for discovering the problem and find new ways to solve problems together. The opportunity for personnel to participate in the work is an important issue in the development of innovators of school principals (Gliddon, 2006). Teamwork and collaboration are key qualities of cooperative leadership which were the ability of school principals to use the process of working with stakeholders and to encourage relationship building that facilitates the mission-oriented practice of the organization (Rubin, 2009; Swart, 2013).

2. The research findings revealed that educational innovators of school principals in all variables had the average level of practice at the high level, with an average level of performance in each sub-area by monitoring performance. It was found that school principals using group activities such as brainstorming, and group discussions to develop their staff and using the information obtained from monitoring as an opportunity to further develop new innovations. That finding is consistent with the concepts of modern leadership that are based on the concept “Self-Leading the self” (Manz, 1986). Self-directed is any operation that is manually started or self-starter with monitoring to find out the cause of what happened to bring direction and self-motivation. Self-direction and motivation are highly innovated school principals use performance monitoring methods to provide root cause analysis and innovation (Manz, 1986; Hernez-Broom & Hughes, 2004; Dawley, 2018).

3. The important conclusions from the development on model of educational innovator of school principals was the methods or processes for developing the potential of school principals. Experts gave their opinions on the potential development method of school principals both self-learning and self-developing. It may apply self-development methods from other successful people or systematically searching for new self-improvement methods and development by relying on others, such as development through the agency, attending training, learning with a co-learning group, such as organizing a professional learning community (PLC), educational innovators of school principals’ group, etc. (DuBrin,

2010). The experts also proposed a condition for developing the potential of school principals, that is, the content of development have to clearly focus on specific innovator competencies and should be based on knowledge and research. Therefore, it is necessary to develop school principals to be users of research results or research consumers and research producers. The policy level has to determine principles of professional development in a global perspective for school principals in the 21st century (The Department of Defense Education Activity, 2014), provide opportunities for school principals as well as promote and support resources to facilitate operations. It is very important to raise awareness and motivation for school principals during skill development and practice (Khalili, 2017). The development process has to focus on active learning and the development ecosystem have to be organized to facilitate the development of school principal's competency. The development policies have to focus on continuous improvement evaluation from multiple perspectives, both team and individual assessments. Learning team and working team in school should focus on the diversity of the members to create new perspectives (Khalili, 2017). Swart (2013) also focused on development from various perspectives from network institutions or organizations that can support and promote educational innovation for school principals.

Conclusion

To develop educational innovators of school principals, it needs to determine an innovation development policy, in which the system that can enhance school principals of all three components, personal characteristics; potential development; and innovation management. The policy must be consistent from the ministry level, education area level, and school level. There should be a human resource development system that clearly focuses on the development of innovator potential, both the system of self-development and the system through the relevant agency. Also, there should be a linking mechanism, which is the key chain established between innovator potential development that is consistent and linked to professional standards, especially in accordance with the qualifications in the professional licenses of school principals that mainly focus on innovative performance and results. One of the key points is the curriculum development should clearly focus on innovator competencies. That curriculum has to meet standards, quality control and evaluation process, organizing a team to carry out a variety of quality courses and training for personnel in charge of development. The process of innovator potential development should be systematically defined, starting from the analysis of needs, process design, implementation, and evaluation. Appropriate innovative potential development methods should be established through innovative methods and program design emphasizing on actual

operations that stimulate creativity. There has been the need to organize development of ecosystem to facilitate the development of the potential of school principals. Mechanisms for monitoring and evaluation of development should be developed with a set of indicators reflecting knowledge and skills be applied in practice. In addition, network institutes or mentor institutes should be established to support, promote supervise, and provide academic assistance to school principals. Finally, there should be policy research and/or curriculum development to develop educational innovator of school principals such as pilot research about the methods or activities to develop educational innovators of school principals.

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