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Opinions of Kindergarten Teachers and School Administrators towards Online Innovative Climate and the Role of Private Partnership to Enhance Innovative Behavior of Kindergarten Teachers

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Abstract

The purposes of this study were 1) to study the opinions of kindergarten teachers towards the online innovative climate, the role of private partnership and the innovative behavior of kindergarten teachers. 2) To study the opinions of the school administrators towards the role of private partnership in enhancing innovative behavior of kindergarten teachers. This study employed a mixed-method research consisting of two parts. Part 1 involved a quantitative research to study the opinions of kindergarten teachers towards the online innovative climate, the role of private partnership, and the innovative behavior of kindergarten teachers. The sample group consisted of 398 kindergarten teachers. Part 2 was a qualitative research to study the opinions of the school administrators towards the role of private partnerships in enhancing the innovative behavior of kindergarten teachers. The results showed 1) opinions of kindergarten teachers towards the online innovative climate and the role of private partnership was high, while opinions of kindergarten teachers towards the innovative behavior of kindergarten teachers was moderate. The online innovative climate and the role of private partnerships had a positive relation with the innovative behavior of kindergarten teachers. statistically and significantly, at 0.01. 2) School administrators pointed out that private partnerships had a significant role towards innovative behavior enhancement of kindergarten teachers.

Key words : innovative climate, online innovative climate, private partnership, innovative behavior, kindergarten teachers.

Introduction

The creation of innovative teaching and learning of kindergarten teacher is the innovation of new thing in term of ideas or actions along with newly studied and developed invention or the modification of existing teaching and experience managements for early childhood children so that the children will learn and experience appropriately with their development. Teachers have to concern about individualism and focus on providing learning by doing experience to the children. Kindergarten teachers, therefore, have to acquire new knowledge about how to generate new ideas for developing teaching innovation.

Innovative behavior deems to be individual's expression in acquiring the way to generate new idea, seeking support for idea to develop new products, ideas or working process beneficial for their job and the organization. It consists of idea exploration, idea generation, idea promotion and idea implementation (Scott & Bruce, 1994: Janssen, 2000; Kleysen & Street, 2001)

Innovative behavior of kindergarten teachers refers to the expression of kindergarten teachers in acquiring idea to generate new concept and support to invent teaching material, electronic material, teaching technique, teaching management method, experience management plan and activity management which comply to development and learning of early childhood children. Nemerzitski et al (2013) had investigated factors influencing innovative behavior or kindergarten teachers in order to answer the research question if school environment influences innovative behavior of kindergarten teachers. They had found that school environment factors could predict self-efficacy and innovative behavior of teachers.

Binnewies and Gromer (2012) had found that creative required working and coworker and supervisor's support also influenced innovative work behavior which complied to the study by Chang & Yang (2012) who studied the relation of innovative organizational environment, creative self-efficacy and innovative behavior and found that there was positive relation among creative organizational environment, creative self-efficacy and innovative behavior. This meant that when a school provides creative organizational environment, learners will perceive support by the organization and teachers. Sufficient resource provision also encourages learners to perceive their creative self-efficacy and have innovative behavior. Finding from the research showed that

the development of teachers with innovative behavior can be done by generating learning and working environment for the teachers to perceive support by the organization, coworkers and supervisor.

At present, information technology and communication highly influence our daily life. We apply computer with our work, utilize different features and resources from the internet and world wide web so that we can source and collect data, access to different knowledge, communicate with each other and apply that knowledge for rapid and real time communication and coordination. For example, we use chat program, online conference and different asynchronous applications like blog, Wikipedia, web board and email which are useful for the development of online innovative environment.

Online innovative climate refers to the venue, channel and tool which are systematically designed using features and resources from the internet and World Wide Web in which their members can perceive knowledge supportive environment, working method and creative relationship. Innovative behavior consisted of adequate resource, challenge and motivation, freedom, communication and collaboration, support and reward, and assessment (Anderson & West, 1998; Biech, 1996; Amabile, 1997; Isaksen & Lauer, 2001; Cropley, 1997).

Creative climate enables teachers to participate with their peers, mentors or specialists and learning resources (Goodyear, 2002). This relationship consists of involvement, participation and collaboration with or without interest, benefit, responsibility and shared risk in term of partnership. Participation of private partnership in education based on education participation promoting strategy led to partnership by private sector, education personnel and schools. These concerned parties are subject to promote, support and assist each other in utilizing resources, co-learning and co-working.

Private partnership in education means the co-working process among private sectors, schools and education personnel to achieve co-target, systemic working with cooperative role and benefit. Private sectors play important role to support, promote and assist resource utilization, co-learning and co-working which consisted of 5 stages as partnership preparation, problem and requirement determination, goal setting, continue planning and working, and assessment and reward (Epstein, 1995; Sanders, 1998; Bryan and Henry, 2012; Moudarres & Ezer, 1995).

In this research, the researcher emphasized on investigating opinions of kindergarten teachers and school administrators towards online innovative climate and the role of private partnership in enhancing innovative behavior among kindergarten teachers, so its findings would be the guideline to develop online innovative climate model based on private partnership to enhance innovative behavior of kindergarten teachers.

Objectives

1. To study the opinions of kindergarten teachers towards online innovative climate, the role of private partnership and the innovative behavior of kindergarten teachers.

2. To study the opinions of the school administrators towards the role of private partnership in enhancing innovative behavior of kindergarten teachers.

Methodology

This study was a mixed-method research divided into two parts. Part 1 involved a quantitative research to study the opinions of kindergarten teachers towards the online innovative climate, the role of private partnership and the innovative behavior of kindergarten teachers. Part 2 was a qualitative research to study the opinions of the school administrators towards the role of private partnership in enhancing innovative behavior of kindergarten teachers. The details are illustrated below.

Part 1 was to study the opinions of kindergarten teachers towards the online innovative climate, the role of private partnership and the innovative behavior of kindergarten teachers. The sample group composed of 398 kindergarten teachers under the Office of Basic Education Commission (OBEC), the Office of Private Education Commission (OPEC), Department of Education Bangkok Metropolitan Administration and Local Government Organizations from all regions in Thailand. They were recruited by multi-stage sampling method. Applied tools to collect data were a questionnaire asking opinions about online innovative climate, the role of private partnership and innovative behavior of kindergarten teachers. The questionnaire comprised of 57 items of checklists, rating scales, and open-ended questions. It had been validated by 5 experts using Index of Item-Objective Congruence (IOC), tested and revised prior to collect actual data. Reliability of the questionnaire was 0.96 based on Cronbach's Alpha. Data was collected from August to September, 2016 and analyzed with descriptive statistics.

Findings were presented as percentage, mean, and standard deviations.

Part 2 was to study the opinions of school administrators towards the role of private partnership in enhancing innovative behavior of kindergarten teachers. 9 school administrators were recruited by purposive sampling method. Selection criterion was being primary school administrators under the Office of Basic Education Commission (OBEC), Office of Private Education Commission (OPEC), Department of Education Bangkok Metropolitan Administration and Local Government Organization. Applied tool to collect data included semi-structured interview about the role of private partnership to enhance innovative behavior of kindergarten teachers. In-depth interview was arranged to obtain qualitative data, and its data was presented descriptively.

Research Results

The results were presented in two parts in line with the research objective:

Part 1: Survey results on kindergarten teachers' opinions consisted of background information of the respondents, opinions towards online innovative climate, the role of private partnership and innovative behavior of kindergarten teachers

1.1 Background information of the respondents

There were 398 respondents in this section of the study, 390 of which were female (98.0%), and 8 were male (2.0%). Their age range was between 31-40 years old (38.9%) and most respondents graduated Bachelor Degree (74.6 %). Most of them were teachers under the Office of Basic Education Commission (OBEC) (55.5%), and were practitioner Level Teachers (K 1 Teachers) (33.2%). Teaching experience of the respondents was 6 – 10 years (33.9%).

Most respondents have used computer and Internet for more than 5 years (60.1%), the frequency of using computer and Internet was 10-15 hours per week (34.2%). 44.2% of the respondents used computer and the internet to search information or resources, and most of them never created any innovation through online climate (53.3%).

1.2 The opinions of kindergarten teachers towards online innovative climate

The opinions of kindergarten teachers towards online innovative climate were presented in Table 1.

Table 1 The opinions of kindergarten teachers on online innovative climate

Online innovative climate	Mean	S.D.
1. Adequate Resource	3.74	1.91
2. Challenge	3.88	2.05
3. Freedom	3.90	2.43
4. Communication and collaboration	3.68	1.33
5. Support and reward	4.33	4.07
6. Assessment	3.61	1.45
Overview of online innovative climate	3.86	1.13

Data in table 1 showed overall and average opinion of the respondents towards online innovative climate was high ($\bar{x}$=3.86, S.D.=1.13). Data by aspects revealed that average score of support and reward was the highest ($\bar{x}$=4.33, S.D.=4.07) and consisted of the application of self-idea and ideas from their peers to create and publicize their work, provision of activity and motivation for their members to develop new ideas, activity and a chance to provide feedback, comment and admiration so that their members could perceive admiration by others, praise or reward obtained from their publication, mentoring and consult by specialists through synchronous and asynchronous communication respectively.

The second highly ranked aspect was freedom ($\bar{x}$=3.90, S.D.=2.43) included happiness to participate with other members, the ability to choose different tools or approaches from online climate to create one's job, searching different sources of information accordingly to one's ability based on that online climate, independent idea expression through web board, blog or other communicating tools on online climate and the ability to generate different idea respectively.

Challenge and motivation were considered high ($\bar{x}$=3.88, S.D.=2.05) and consisted of precious objective, activity to generate new ideas to reach online climate objective, having precise objective, excitement and satisfaction towards online climate, practical and achievable target of online climate, and participation of all members in determining objective of online climate respectively.

Adequate Resource was considered high ($\bar{x}$=3.74, S.D.=1.91) and it included resource availability, search engine to

support exploration of data, knowledge and new ideas, content sharing tools in term of news, data, photo, audio or visual files which support share resource usage, availability of communicating tools, proper co-working and presentation, provision and sharing of different resources to generate new ideas, proper and sufficient personnel doing different duties and instructions for different resources and tools respectively.

Communication and collaboration were considered high ($\bar{x}$=3.68, S.D.=1.33) including members of online community sharing knowledge and ideas highly, sharing useful knowledge, ideas and methods among members through web board, blog, wiki and other communicating tools, team working based on member's potential and interest through chat room and other social medias such as Facebook, discussion and idea sharing concerning different and conflict ideas through web board, blog and other tools, and members helped each other in exploring new methods to solve the problem through web board, blog and other tools.

Assessment generated lowest average at high level ($\bar{x}$=3.61, S.D.=1.45) including assessment system during and post activity, members' participation with job assessment of oneself and others through assessment system, statistics system to track log in and usage, and assessment system by experts respectively.

1.3 The opinions of kindergarten teachers on the role of private partnership

The opinions of kindergarten teachers on the role of private partnership were presented in Table 2.

Table 2 The opinions of kindergarten teachers towards the role of private partnership

The role of private partnership	Mean	S.D.
The role of private partnership to promote, support and assist resource sharing.	3.97	3.02
The role of private partnership to promote, support and assist the collaborative learning.	3.78	2.18
The role of private partnership to promote, support and assist co-working.	3.70	1.84
Overview of the role of private partnership	3.82	1.48

Samples in table 2 highly commented on the role of private partnership with high average value ($\bar{x}$=3.82, S.D.=1.48). We had found that the role of private partnership to promote, support and assist resource sharing was the highest ($\bar{x}$=3.97, S.D.=3.02) and included private organization equipped with up to date and various data and capable personnel to support, promote and assist teachers' learning and working and various database along with the participation with resource exploration to support, promote and assist teachers' learning and working.

The second ranked aspect was the role of private partnership to support, promote and assist cooperative learning highly ($\bar{x}$=3.78, S.D.=2.18) including teacher association aiming to learn together, support of learning tools and various working, variety of learning activity, and participation with learning assessment among private partnership and kindergarten teachers.

The least average was the role of private partnership in supporting, promoting and assisting co-working at high level ($\bar{x}$=3.70, S.D.=1.84) including activity to encourage teachers to create innovation, support, promotion and assistance for teachers to create innovation, publicize their innovation and share gaining or loss of the innovation.

1.4 The innovative behavior of kindergarten teachers

The innovative behavior of kindergarten teachers was presented in table 3.

Table 3 The innovative behavior of kindergarten teachers

Innovative behavior of kindergarten teachers	Mean	S.D.
Idea Exploration	3.22	0.69
Idea generation	3.34	2.35
Idea promotion	3.22	1.71
Idea implementation	3.52	3.62
Overview of innovative behavior of kindergarten teachers	3.32	1.21

Table 3 revealed that correspondents had moderate overall and average innovative behavior ($\bar{x}$=3.32, S.D.=1.21). Data of different aspects showed that teachers' idea implementation behavior was high ($\bar{x}$=3.52, S.D.=3.62) and included the application of acquired knowledge and experience with their innovations

such as early childhood experience planning, activity planning and teaching materials. Their innovations such as early childhood experience and activities plans and teaching materials were applied with their teaching and job improvement consistently.

The second ranked aspect was teachers' idea generation behavior which was moderate ($\bar{x}$=3.34, S.D.=2.35) including knowledge integrating behavior or different teaching management methods obtained from their teaching experience with the development and design of new things, the ability to further develop existing concept and utilize those concepts with their teaching, and the development of new and useful experience and activity plans and teaching materials.

The least average was teachers' idea exploring behavior which was moderate ($\bar{x}$=3.22, S.D.=0.69) including catch up with the latest news and advancement of early childhood education such as news about early childhood curriculum, teaching material and method for early childhood class, new data exploration to apply with their innovation like early childhood experience and activity planning, teaching material, exploring new learning to improve oneself like taking a short course, attending some trainings or social community, the ability to identify problem, improvement, solution. Teachers' idea promotion behavior was considered moderate ($\bar{x}$=3.22, S.D.=1.71) including pursuit to present new and self-developed knowledge or teaching material so that the teacher earned support by their supporters, and participate with different social activities such as early childhood academic conference to convince and persuade other people to agree with their concept and publicize the concept later on.

1.5 Relative analysis of online innovative climate, private partnership and innovative behavior

The result of correlation analysis of online innovative climate, private partnership and innovative behavior was shown in table 4 as below.

Table 4 Correlation coefficient of online innovative climate, private partnership and innovative behavior (n=398)

Variable	Correlation Coefficient (r)	p-value
Online innovative climate	.192**	.000
Private partnership	.392**	.000

** Statistics significance at 0.01

Data in the table 4 revealed that innovative behavior had statistically and significantly positive relation with online innovative climate and private partnership at .01. Online innovative climate had low relation with innovative behavior and private partnership had fair relation with innovative behavior.

Part 2: Data from the interview with school administrators was collected and analyzed as qualitative data. School administrators commented about innovative behavior of kindergarten teachers, the role of private partnership in enhancing kindergarten

Teachers and the development of online innovative climate model to enhance innovative behavior of kindergarten teachers. Its details are as follow;

2.1 School administrators' opinions towards innovative behavior of kindergarten teachers 9 school administrators revealed that primary teachers in their school have good idea exploration by self-learning, learning it from textbook, literature or academic journal, taking training, seminar or academic conference provided by government sector. In addition, these teachers also shared their knowledge with kindergarten teachers inside and outside their school, attended to observe study at primary school model and researched on the internet.

Further to idea generation behavior, school administers commented that kindergarten teachers in their school had applied their knowledge from the class, research and experience with activity planning for their primary students and applied them as the guideline for teach media selection to provide good experience for primary students. There were some teachers who applied their knowledge with the development of new concept of teaching material development and innovation for primary students.

Most school administrators commented that some primary teachers in their school had idea promotion in the meeting when they were assigned by

school administrator. There were a few teachers who proposed the idea by themselves. This was why school administrators had to encourage primary teachers to submit their project study about new concept to develop teaching material and innovation.

Further to idea implementation, most school administrators commented that a few primary teachers in their school could further their idea with the development of experience and activity plans, teaching material and innovation that complied to learners' circumstance definitely. Most primary teachers have been using the existing ones. There were only a number of teachers who could acquire knowledge to develop new concept and academic portfolio so that they would be promoted as senior professional level teachers or develop new primary teaching material/innovation for a competition.

Most school administrators expected or hoped their primary teachers to be able to develop teaching material/innovation and design proper activities suitable for the development of primary students instead of using existing materials which were not suitable for the school circumstance. Some school administrators also expected that primary teachers will have the ability to develop up-to-date teaching material using some technologies.

2.2 School administrators' opinion towards the role of partnership in developing kindergarten teachers 9 school administrators agreed to acquire private sectors participation with the development of education personnel. They agreed that private sectors are available in term of investment, resource, data and up-to-date learning material, along with new perspectives which are essential for knowledge and proficiency development of kindergarten teacher. Private sectors can support and promote learning and portfolio development of kindergarten teachers with support for different educational activities such as training, workshop, knowledge resource and different materials or devices. In addition, school administrators also pointed out that private sectors had provided financial support to develop kindergarten teachers, teaching materials / innovation for primary education and publication for these teachers' portfolio or innovation.

School administrators had allowed private sectors to participate with kindergarten teacher development in their school so far. They had arranged training both inside and outside their school, provided different materials or devices. Private sectors had provided

budget and personnel support to arrange different activities for primary students. These experiences and activities are advantage for the development and education of primary students.

Most school administrators expected private sectors to support, promote and assist their school with training for kindergarten teacher development, teaching materials and devices, the production of teaching material or innovation and publicizing kindergarten teachers' innovation.

2.3 School administrators' opinion towards the development of online innovative climate model based on private partnership to enhance innovative behavior of kindergarten teachers 9 school administrators agreed that online climate is the source of education and knowledge. It enables kindergarten teachers to gain more knowledge and skill. Since online climate can be accessed easily and conveniently, users can apply data and knowledge. 8 school administrators pointed out that kindergarten teachers in their school were competent in using online climate excellently because they are skillful in using computer and the internet. Only a school administrator pointed out that his kindergarten teacher lacked of knowledge and understanding about online climate usage, particularly how to search data correctly and rapidly.

School administrators expressed their comment and suggestion about the development of online innovative climate based on private partnership concept to enhance innovative behavior of kindergarten teachers as the following. The development consisted of different elements including knowledge resource, challenge, learning motivation and working, systemic communicating tool, inspection and evaluation, and application to generate new ideas or concepts. They pointed out that period of operation could be short (for 3-5 days) as activities on the holiday or after hour period or long (10 weeks – 1 semester) as continuous activities. They revealed that the way to make kindergarten teachers acquire innovative behavior was having effective assessment and certain duration for monitoring. School administrators expected that online innovative climate based on private partnership concept to enhance innovative behavior of kindergarten teachers and lead to true application at schools.

Conclusion and Discussion

Results of the research of opinion of kindergarten teachers and the school administrators towards online innovative climate and the role of private

partnership in enhancing innovative behavior of kindergarten teachers were discussed in the following topics:

1. Further to the study of kindergarten teachers' opinion towards online innovative climate, findings revealed that most kindergarten teachers could apply computer and the internet with their communication, searching knowledge and working consistently. They mostly used computer and the internet to update their knowledge and data and learn about new things. In addition, the study of current circumstance of online innovative climate showed high overall and by aspect opinion of kindergarten teachers. The highest mean average was support and reward, followed by independence, challenge, motivation, sufficient provision of resources, communication and co-working. The least average was assessment which complied to obtained data from the interview with school administrators which found that most kindergarten teachers could use computer and the internet in which school administrators agreed that online climate is a good source of information to enhance skill and knowledge of kindergarten teachers because it is convenient to access and it provides practical knowledge and data. It is obvious that online innovative climate consists of different elements including knowledge resource, motivation and reward, systemic communicating tools, short (3-5 day) activity on holiday or extra hour period, long (10 week – 1 semester period) activity and proper assessment and monitoring.

2. The study of the role of private partnership showed high overall and average opinion of kindergarten teachers towards each aspect. The highest average included the role of private partnership to support, promote and assist co-usage of different resources. It was followed by the role of private partnership to support, promote and assist for co-learning, and the least average was the role of private partnership to support, promote and assist for the development of co-performance. While school administrators commented about the role of private partnership that they agreed with their participation in developing educational personnel. Since private partnership are ready and available for investment, resource, data, up-to-date teaching material and new perspective which are essential for developing knowledge and proficiency of kindergarten teachers such as training, workshop, support for knowledge resource, material and device, activity for students and budget to develop primary education. School administrators have allowed private

sectors to participate with the development of kindergarten teachers in their schools in term of support for material, device and activity for primary students. These school administrators also expected and wanted private sectors to support, promote and assist their school to provide training, material, innovation and performance publicizing for kindergarten teachers.

3. The study of innovative behavior of kindergarten teacher showed moderate overall and average innovative behavior. The consideration of each aspect showed that the highest average was idea implementation, followed by new idea generation and seeking support for the new ideas, and the least average included idea exploration and idea promotion. While school administrators pointed out those kindergarten teachers had idea exploration behavior by self-learning from text book, literature, academic journals and they attended training, workshop and academic conference arranged by government sectors. They also learned from the internet, applied their knowledge from study, research and experience with activity management and applied it as the guideline to choose teaching material for arranging experience learning for primary students. Just some teachers applied their knowledge for idea generating, develop teaching material / innovation for primary students. Idea promotion of these teachers is usually assigned by their supervisors. We had found that a few teachers could learn and develop new concept and idea implementation in order to get promotion as senior professional level teachers or for competition. Most school administrators expected and wanted kindergarten teachers to develop teaching material or innovation and design activity that is suitable for the development of primary student instead of using the existing ones which might not comply with school circumstance. Some school administrators also expected kindergarten teacher to develop up-to-date teaching material using advance technology.

4. The study of relation among online innovative climate, private partnership and innovative behavior showed that online innovative climate and private partnership positively related to innovative behavior statistically and significantly at .01. Online innovative climate had low relation with innovative behavior, and private partnership had fair relation with innovative behavior. This complied with the study by Chang & Yang (2012) who investigated the relation among organizational innovative climate, creative self-efficacy and innovative

behavior and found that there was positive relation among organizational creative climate, creative self-efficacy and innovative behavior.

The relation of private partnership with innovative behavior showed that the role of private partnership in this study consisted of the role of private partnership to promote, support and assist resource sharing, collaborative learning and co-working which conformed to the study by Scott & Bruce (1994) who found that support of knowledge resource, different tools and materials, facilities and time were essential for developing innovation. In addition, the study by Smith & Shally (2003) pointed out that innovation was the result of communication and co-working of the personnel, sharing among group members or innovative climate which influenced and promoted attributes of innovative behavior (Amo, 2005).

Recommendations

This research had studied the opinions of kindergarten teachers and school administrators towards online innovative climate and private partnership to encourage innovative behavior of kindergarten teachers and the relation of online innovative climate, private partnership and kindergarten teachers' innovative behavior. The study enabled the researcher acquire necessary data leading to the development of online innovative climate model based on private partnership to enhance innovative behavior of kindergarten teachers and further study of this model application later on

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