

THE CURRENT STATE AND PROBLEM STATUS OF CHILD CARETAKERS USING EDUCATIONAL INFORMATION TECHNOLOGY IN THAILAND

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Abstract

The purpose of this research were to study the status and problems involving the use of educational information technology for learning experience management within the environment of pre-school children in early childhood center and to identify suitable guidelines for the use of educational information technology by child caretakers in Thailand. This research utilized a mixed method approach. The samplings from the quantitative method were 384 child caretakers in the academic year 2012 in early childhood centers from the department of local government of the Ministry of Interior. The samplings from the quality method included in depth interviews with 12 individuals selected from child caretakers and administrative persons from various local government organizations. The research tools included questionnaires and in depth interviews to identify the suitable guidelines for the use of educational information technology by child caretakers. The results showed: 1) child caretakers preferred the educational information technology for the learning experience management in accordance to the requirements of children. The preparation, selection and use of the educational information technology were calibrated to the age of child. 2) child caretakers could not organize learning activities on time due to insufficient budgets for the preparation and selection of the educational information technology devices. The guidelines for the use of educational information technology by child caretakers in Thailand are as follows: 1) provide sufficient budget to the early childhood center 2) the head of the child caretakers must report problems to the original affiliation in order to get the needed support 3) child caretakers themselves must use their own time to study and update their own knowledge of the educational information technology.

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บทคัดย่อ

การวิจัยครั้งนี้ มีวัตถุประสงค์เพื่อศึกษาสภาพและปัญหาการใช้เทคโนโลยีสารสนเทศทางการศึกษาในการจัดประสบการณ์การเรียนรู้การจัดสภาพแวดล้อมสำหรับเด็กปฐมวัยรวมถึงศึกษาหาแนวทางการพัฒนาการใช้เทคโนโลยีสารสนเทศทางการศึกษาของผู้ดูแลเด็กปฐมวัยในศูนย์พัฒนาเด็กเล็ก โดยมีกลุ่มตัวอย่างเชิงปริมาณได้แก่ ผู้ดูแลเด็กประจำศูนย์พัฒนาเด็กเล็กในความรับผิดชอบของกรมส่งเสริมการปกครองท้องถิ่นกระทรวงมหาดไทยประจำปีการศึกษา 2555 จำนวน 384 คนกลุ่มตัวอย่างเชิงคุณภาพ 12 คนมาจากการเลือกแบบเจาะจงและมีการสัมภาษณ์เชิงลึกโดยเลือกจากผู้ดูแลเด็กเล็กสังกัดกรมส่งเสริมการปกครองท้องถิ่นและผู้บริหารของเทศบาลเมือง/เทศบาลตำบล/องค์การบริหารส่วนตำบลเครื่องมือในการวิจัยประกอบด้วยแบบสอบถาม

การศึกษาผลการดำเนินงานในการจัดการศึกษาของผู้ดูแลเด็กในศูนย์พัฒนาเด็กเล็กของประเทศไทยและแบบสัมภาษณ์เชิงลึกเพื่อศึกษาแนวทางการพัฒนาการใช้เทคโนโลยีสารสนเทศทางการศึกษาของผู้ดูแลเด็กปฐมวัยในศูนย์พัฒนาเด็กเล็กผลการวิจัยสรุปได้ว่า 1) มีการเลือกใช้เทคโนโลยีสารสนเทศทางการศึกษามาใช้ในการจัดประสบการณ์การเรียนรู้สำหรับเด็กปฐมวัยตามความต้องการและตามความสนใจของเด็กปฐมวัยมีหลักการในการจัดเตรียมคัดเลือกสื่อ และอุปกรณ์การใช้เทคโนโลยีสารสนเทศทางการศึกษาตามความเหมาะสมกับวัยของเด็ก 2) ครูไม่สามารถจัดกิจกรรมที่มีการนำเทคโนโลยีสารสนเทศทางการศึกษามาใช้ในการจัดประสบการณ์การเรียนรู้ตรงตามเวลาที่กำหนด และมีปัญหาด้านการจัดเตรียมคัดเลือกสื่อและอุปกรณ์การใช้เทคโนโลยีสารสนเทศทางการศึกษาในการจัดประสบการณ์การเรียนรู้เนื่องจากงบประมาณไม่เพียงพอและแนวทางการพัฒนาการใช้เทคโนโลยีสารสนเทศทางการศึกษาของผู้ดูแลเด็กปฐมวัยในศูนย์พัฒนาเด็กเล็กของประเทศไทยมีดังนี้ 1) มีการจัดสรรงบประมาณให้เพียงพอและทั่วถึง 2) หัวหน้าผู้ดูแลเด็กในศูนย์พัฒนาเด็กเล็กควรรายงานขอความสนับสนุนไปยังหน่วยงานต้นสังกัด และ 3) คุณครูผู้ดูแลเด็กเล็กควรศึกษาหาข้อมูลด้านการใช้เทคโนโลยีสารสนเทศด้วยตนเองอย่างสม่ำเสมอ

INTRODUCTION

The local government organizations are responsible for the early childhood centers, which were transferred from other government sectors. The early childhood centers were established by the local government organizations for having the duty to sup-

port the early childhood centers to have a good standard and high potential development to the children. (Department of local government, 2008). The educational management of early childhood centers focuses on the early years especially 3-6 years old which are the important phase for high potential development of the physical body,

emotions, social, intelligence and behavior. The educational activities must be accurate and concerned with the moral, ethic, disciplinary and ready to study at the primary education level. The pre-school age from newborn to six years old is the phase of learning preparedness. These pre-school age children are ready to learn and encounter the novel experiences because their nerve fibers and brain system are rapidly growing. The quality of learning outcome depends on the quality treatment. (Tepteian, B. and Trakulwong, P., 2007, p.118)

Information technology can be used with pre-school children with both a direct and an indirect method. For direct usage children can use computer educational software. For example computer aid instruction (CAI), educational games and edutainment software. Most of educational software provides knowledge, decision making and problems solving which are relevant to the Early Childhood Education Curriculum of the year 2003 on the guidance of learning experience activities in article 2.2. The leaning experience activities must be appropriated for learning characters, which children can do by themselves through five sensations via movement, exploring, playing, observation, investigation, experimenting and problem solving. The article 2.6 refers to the learning experience activities in order to interact with media and learning environment, which appear within their multiple life styles. At present information technology is a part of the children's daily life. It is also relevant to the Nation Education Act, year 1999, category 9, section 66 that specifies the learner has the right to develop their ultimate po-

tential for using educational information technology to acquire the knowledge by themselves so as to become lifelong learners. For indirect usage information technology is used for administrative work such as the database of pre school students. Malithong, K. (2005, p.242) said that computer is an education innovation which is able to be used as an administrative tools and teaching media.

For the previous research on the use of educational information technology in pre-school level found that the early childhood centers which belong to the department of local government use information technology only 0.2 percent of total early childhood centers in Thailand (Chitpong, P, 2006). This percentage is a tiny proportion when compared to the 17,821 centers in Thailand with over 900,000 children for preparation and 45,942 caretakers (Department of local government, 2008). It was relevant to the research of Pimkarn Maiwattana (2007) who studied the problems of information technology usage in early childhood centers, which belong to the department of local government. She found that the centers lacked the professional personnel, the budget restriction on location and information technology media. Moreover, there were responsibilities overload of child caretakers. There were a lack of educational information activities application from child caretakers and insufficient educational technology devices. The learning activities areas were not enough. There were out of supporting on the human capital, standard data and also the lack of participation from nearby community.

From the problems mentioned above

and the fact finding of the researcher who is familiar with the project of Academic Corporation for Early Childhood Educational Personnel Development developed an agreement between Suan Dusit Rajabhat University and the Department of Local Government, Ministry of Interior. This project aims to produce pre-school graduates with school base for educating child caretakers in early childhood centers of the department of local government around Thailand in order to reach bachelor degree of early childhood education. These were the main reasons that made me interested to research "The Current Status and Problems Issues on the Use of Educational Information Technology for Child Caretakers in Thailand".

The researcher is also interested in continuing the previous research on "Developing Guidelines in Information to Organize Learning Experiences of Caretakers in Early Childhood Centers". I would like to conduct other early childhood educational research for the utilization of data to implicate organization to set up the strong background of early childhood education in Thailand and to develop the pre-school educational personnel with high potential of using the educational information. This research will also set up the guidance for librarians, executives, and relevant persons to promote and support the appropriate educational information for pre-school students.

OBJECTIVES

1. To study the current status and the problems of the use of educational infor-

mation technology for learning experience management and the environment of pre-school children in early childhood center.

2. To identify suitable guidelines for using educational information technology by child caretakers in Thailand.

CONCEPTUAL FRAMEWORK

This research project is a mixed method approach. The management of qualitative method is a collection of data from child caretakers about age, education level, experience of the use of educational information technology for learning experience management of child caretakers, and problems state about educational information technology inexperience management for early childhood and the management of environment for child caretakers in early childhood center in Thailand. For the quality method included in depth interviews about the opinion and problems of using information technology for learning experience management and environment of pre-school children in early childhood center in order to find the suitable guidelines for the use of educational information technology in management of the learning experience for children and the management of environment for child caretakers in early childhood center in Thailand.

RESEARCH METHODOLOGY

1. Population and samplings

The population of this research were 45,942 child caretakers belonging to the

local government organizations all over Thailand. The quantitative samplings were of 384 child caretakers. The samplings for in depth interviews were 12 purposive sampling from the administrative of municipalities (6 samplings) and child caretakers (6 samplings).

2. Quantitative research

Research questionnaires are used for quantitative method that create for querying the current state and the problems issues of the usages of educational information technology of child caretakers in Thailand including of three sections: 1) general status of sampling 2) the current state and the problems issue of the usage of educational information technology to organize the learning experience of early childhood and 3) the current state and the problems issue in environmental management of educational information usage of child caretakers in Thailand and find out the reliability of whole questionnaires using alpha coefficient that able to get .931 of reliability. The statistic values of this research are percentage, mean and standard deviation.

3. Quality research

The in depth interview questions referred the previous data of section 2 and 3 which investigate the value of Index of Item-Objective Congruence (IOC) and find out the value of Content Validity Ration (CVR) that able to get .87 of CRV. There are two sections of in depth interview:

- 1) interview about the current state and problems of operational using of educational information

technology in learning activities and
2) interview about the current state and problems of environmental management of using educational information technology.

RESEARCH RESULTS

1. The Personal Data of Child Caretakers

Most of the target child caretakers are 31-40 years old (178 number, 46.63 percent). The educational level of child caretakers is bachelor degree (336 number, 87.50 percent) and most of them graduated from early childhood education (286 number, 74.47 percent). Most of child caretakers have experience with using educational information technology for more than 4 years (204 number, 53.12 percent)

2. The Current State and Problems of Educational Enformation Technology for Leaning Experience Organization and Environment Management of Child Caretakers in Thailand

2.1 Learning activities management

Child caretakers selected the educational information technology for learning experience organization according to the requirement and the interesting of children (318 number or 82.81 percent) and according to the development, the basic knowledge of children (294 number or 76.56 percent) and other purpose 12 percent.

Most of the child caretakers organized the learning experience with concern for the appropriate duration and flexibility by

the interesting of children (320 number, 83.33 percent). Then, there were concerned about the requirement and the interested of children (302 number, 78.64 percent), child development (272 number, 70.8 percent), group and individual activities (184 number, 47.91 percent) and specify activities with schedule respectively.

2.2 The role of child caretakers

Child caretakers prepared the educational information technology for learning experience organization according to the proper age (360 number, 93.75 percent), prepared by the leaning unit (310 number, 80.72 percent), the commentary of the chief of childhood development center (72 number, 18.75 percent) and only few percent-age with other purpose of preparation.

2.3 The problems of learning experience organization

There were problems of the learning experience organization. Most of child caretakers (282 number, 73.43 percent) had the following problems: unable to create any activities which involved using educational information technology on time (136 number, 35.41 percent), they did not understand the method for using educational information technology to organize the learning experience with relevance to the child's development (128 number, 33.33 percent) and the number of 116 caretakers applies educational information technology for the management of learning experience which is not harmony to the expected plan.

2.4 The problems of child caretakers

The problems of preparation of media

selection and the use of information technology education in learning experience. Most of child caretakers experience problems is 346 number or 90.10 percent, the problems included proactively budget insufficient is 284 number or 73.95 percent, and followed by the lack of cooperation from local administrative organization is 182 number or 47.39 percent, lack of knowledge and understanding of preparation and selection of media and equipments is 142 number or 36.97 percent and lack of time for preparation, selection of media and the equipments is 17 percent.

3. The Current State and Problems of the Environmental Management for using of Educational Information Technology

3.1 Zoning

The management of space and area for early childhood about using media and information technology equipment in the early childhood development centers, found that, most of child caretakers have separated the appropriate area to use the media and information technology education equipment for early childhood is 246 number or 64.06 percent, and followed by a space is proportional to the number of 220 caretakers or 57.29 percent, the management of space and area to show the activities of children about their using of media and equipments of educational information technology is 130 number or 33.8 percent and to build up the area suitable for using of media and equipments of educational information technology is 31.7 percent.

3.2 The problems of environmental management of the using of educational information technology

Problems of management of space and area for early childhood about using media and equipment of information technology education, found that, most of child caretakers experience problems is 316 number or 82.29 percent, and considering in each aspect found that the space and area about using media and equipment need to be shared with others activities is 216 number or 56.25 percent, followed by problem of classroom space is confined is 202 number or 52.60 percent, and problem in the area of early childhood development center with limited space and cannot expand upon is 156 number or 40 percent and noisy is 66 number or 17.18 percent.

4. Guidelines to Develop the Use of Education Information Technology for Child Caretakers in Thailand

The results from in depth interview from the administrators and local government officers are as follows:

4.1 Planning for using information technology for administrative duties in order to adapt the principle and educational theory for local governing planning, to facilitate child caretakers and children such as computer notebook, CD DVD player, to store the data of children and child caretakers by information system, campaign for donation, to educate how to using educational information technology by university students and to provide the proper area.

4.2 The personnel supporting guidelines for using of informational technology are seminar of child caretakers for search-

ing data, data store and maintenance of educational information technology, to provide the scholarship for child caretakers, to arrange the appropriate amount of child, caretaker teachers and assistants.

5. The Solution's Guidelines for Using Educational information technology in Early Childhood Center in Thailand

The results of in depth interview of child caretakers in Thailand are as follows: the local government administration must propose extra budgets for providing and the maintenance of educational information technology, to provide the high security for early childhood center and should be request for donation of educational information technology from government and private sectors.

SUMMARY AND DISCUSSION

The current status and the operational problems of using educational information technology at early childhood center are not appropriate for using educational information technology because of the following reasons: 1) the restriction area, the most area is used for other activities 2) the decadent building where no area for keeping the information technology device 3) the problem of internet connection 4) most of early childhood center have no watchman and 5) some early childhood center is in the cafeteria and organize the learning activities in the area of primary school. Furthermore, there are insufficient budgets to purchase the information technology

device and child caretaker development. It is the lack of child caretakers that results in the appearance ratio of children per child caretaker more than 20:1. There are educational information technology devices in some early childhood center but out of Internet access and the lack of the knowledge for using educational information technology.

The guidelines for operational development for using educational information technology in Thailand are as following: the responsible agency must provide sufficient budget funds and supply the educational information technology devices in order to support the learning experience preparation, store and report of children date and also for self-development, the responsible agency must set up the course of educational information technology usage for child caretakers especially the knowledge of searching the Internet for learning experience management, child caretakers may use their own device materials such as computer notebook for learning experience management, child caretakers have the right to choose the educational information technology devices, to setup the community participation on the facilities with donations and associated activities, to setup a committee for educational media selection, to emphasize their own teaching experience for learning experience, should be the staff for taking care the education information devices, should be setup the CCTV for safety, should build their own building for early childhood center and the involved organization must setup a website, provide educational information media, CD and DVD player and also the projector for learning experience development with a

screening committee.

RECOMMENDATION

1. The recommendation for the responsible agency on the operational staffs relevant to the chief of the early childhood center must report to the affiliate organization requesting sufficient budgetary funds to purchase the educational information technology devices. The addition of a teacher who gets more knowledge of the educational information technology for efficiency is very important. Guards are also important for early childhood center. Early childhood center must insure safety for the information technology devices. Child caretakers must always update their knowledge of information technology by themselves. The Internet connection should be set and selection the educational information technology by own. It is necessary for community to participate so they can donate and setup the facilities for early childhood center. The community should participate with learning experience organization together with natural local media. Should be the setup the committee for education information media selection and adjust the location of early childhood center with safety fence.

2. The recommendation of the policy are including of the chief of municipality should prepare the exact amount of child caretakers who have the knowledge of information technology and engage them with equitable earnings and appropriate welfare. To announce the policy of using educational information technology for learning experience organization to child

caretakers. The department of local government should be setup sufficient budgets for seminar and training of child caretakers, to provide the expert on educational information technology for training, and also to create the manuals of educational information technology for child caretakers. The department of local government should provide the extra budget for environmental management. Child caretakers must request from corporations with nearby universities for the support of the counsel and knowledge exchange about the setup of education information materials and the using of educational information technology and to train child caretakers on the use of educational information technology and always monitor them on the operational usage in the real situation. The providing of seminars to the affiliate leader of early childhood centers on the management of use of educational information technology and regularly monitor of their operations. Librarians and educational staff should collect the educational information media for learning experience organization in CD, DVD and database format and disseminate to early childhood center. They should introduce the information searching for child caretakers in order to get the up to date information and the sub district organization should encourage the academic educational staff to get more knowledge and able to collaborate with early childhood center.

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