Work-based blended learning and technological scaffolding system to enhance communication skills for caregivers under Local Administrative Organization, Ministry of Interior, Thailand (Part I)

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Abstract

Communication skills are very important factors which contribute to success in every career in the 21st century. Professional development plans for future caregivers; therefore, should include developing these skills. Caregivers are adult learners for a bachelor’s degree in the field of early childhood education, so learning by doing during work is the most effective method of acquiring new skills. They need to learn how to use technology in developing communication skills, studying the content of early childhood education, and working at Childcare Centers. This study investigated work-based blended learning and technological scaffolding system and found out how they enhance the caregivers’ communication skills. The study was divided into three phases. Phase one was studying existing theories and research about work-based learning, blended learning and scaffolding. Phase two was developing the communication system for the study. Phase three was interviewing experts about the developed system. The synthesis and content analysis identified that the system included five components: Job, Learning Activities, Technology, Evaluations and Key stakeholders. The system’s process consisted of Preparation, Analysis, Planning, Learning, Discussion and Evaluation. The scaffolding included Job aid scaffolding, Stakeholder scaffolding and Resource scaffolding. The result of study will be used as a system for teaching communication skills development for caregivers in Thailand.

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Keywords: Communication skills; Work-based learning; Blended learning; Scaffolding; Caregivers.

1. Introduction

Effective communication is widely accepted as a foundation skill that people needed to be succeeding in a workplace (Schulz, 2008; Evans, Waite & Admasachew, 2008). Nowadays, power of modern media and ubiquity of

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communication that affect people all over areas including education. For many years, several countries have been interested in developing and preparing teachers to adopt technology for communication skills. For example, the National Association for the Education of Young Children (NAEYC, 2012) states that early childhood teacher candidates should know variety of communication skills and use technology as a professional resource to communicate with families, with children, with peers.

Ministry of Education (MOE), Thailand was announced Thai Qualifications Framework for Higher Education (TQF) as a standard guideline in the quality of an academic award titles for higher education. The framework describes that the expected increasing levels of knowledge and skill in each area of qualification including early childhood teacher. Developing abilities of them require use of method of instruction that take ability of early childhood teacher candidates in communication, higher order thinking skills, and preparation through the use of ICT (MOE, 2011).

In response to the TQF, this research is interested in the process of how to develop and improve communication skills of teacher particularly early childhood candidate teachers or caregivers. Caregivers defined as adult learner for a bachelor’s degree in the field of early childhood education who is working supervision of Local Administrative Organization, Ministry of Interior (MOI). There are 33,550 caregivers who are responsible for looking after 940,152 children who are age 2-5 in 19,820 Childcare Centers all over Thailand (Thai Parliamentary, 2013). The author collected preliminary data via in-depth interview with experts of MOI. The finding found that the caregivers had a limited knowledge in early childhood education and communication skills with technology. Learning by doing at work is the most effective method of acquiring new skills. This research focuses on how to improve caregivers in communication skills during their study in early childhood preparation program. Work-based blended learning and technological scaffolding system are used as a theoretical basis to propose the system.

2. Review Literature

2.1. Work-based learning

Since the beginning of the 1990s, Learning by doing at work environment was developed from Kolb’s Experiential Learning Theory (Kolb, 1984) using knowledge management approach and problem solving from work practice (Realin, 2008). Levy, Oates, Hunt & Dobson (1989) defined work based learning as “linking learning to the work role”. The Chartered Institute of Personnel and Development (CIPD, 2005) states that work based learning is “a self-directed, work-based process leading to increased adaptive capacity. Individual ‘learn to learn’ and possess the capabilities that enable them to do so to help to build and retain competitive advantage”. Realin (2008) argues that work-based learning expressly acquire in action and dedicate to the work task with experiences. He goes on to argue that workplace offers as many opportunities for learning as studying in the classroom. Moreover, Bruge et al. (2012) researching in UK Schools that teacher could develop their skill while they work in their workplace, this research found that work experiences can help staff to improve their skill and confidence. Lester & Costley (2010) refer work-based learning logically as “any learning that situated in the workplace or arises directly out of workplace concern”. Gray (2001) identifies term of work-based learning in various forms. Each form has different pedagogic approaches learning and development method such as action learning, coaching delegation, discussion board and group, projects, reflective practice (Clifford & Thrope, 2007; Shaw, Rout & Wise, 2011). There are various types of work-based learning activities such as Internship, Community Service Program, Cooperative Education Experience, and Tech Prep Program (Swail & Kampits, 2004). Different types utilize differently depending on objective and target group. The concept of work based learning in this paper utilizes Realin (2008)’s model based on Kolb’s Experiential Learning Theory and Honey & Mumford’s learning cycle. These can help the learner for reasoning and reflecting in work context (Durannt et al., 2009) both in individual and collective level (Realin, 2008) under supervision of mentors. Evaluation processes involve discussion, observation and reflection of learner within workplace (Stenström & Tynjälä, 2009; Gaskell & Beaton, 2010).

2.2. Blended Learning

Blended learning is flexible, hybrid, mixed mode or distributed learning. Graham (2005) argues that blended learning is learning combination between face-to-face and self-paced online learning. Blended learning can help learner more understanding than online learning or traditional learning. This is because blended learning provide learners with enriched learning experiences. Research studies found that learners satisfaction levels can be improved by adopting blended learning (Oh & Park, 2009; Songkram, 2012). Many researchers agree that blended learning is the most appropriate method in instructional strategies (Khlaisang & Koraneekij, 2012; Songkram, 2012). Clifford & Thrope (2007) argue that the blended learning is a key success of work-based learning. This enables learners to be more flexible and efficient. Blended learning combine multiple approaches; including context, methodology,
technology, theory and practice, allow adult learner to learn more effectively (Zhao & Yang, 2011; Gao, 2012; Yuen, 2010).

2.3. Scaffolding

The concept of scaffolding is the method which aims to help learners to fill the gap “Zone of Proximal Development (ZPD)” for appropriate assistance to achieve the goal. Vygotsky (1978) defined ZDP as “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers”. However, the scaffolding can be extracted from the system if learners are confident and able to complete the task. In case of adult learners, the learning scaffolding has passed through their diversity and related the task at workplace (Reingold, Rimor, & Kalay, 2008; Majid, 2010). Each type of scaffolding was affected by the diversity of learners and nature of work such as technology resources, peer support or teacher-led discussions (Puntambekar & Hubscher, 2005). Technological scaffolds can assume some routine support tasks and allow the teacher to provide dynamic support. The design focuses on common learner misunderstandings or difficulties to contain the range of problem solving or task performance option (Sharma & Hannafin, 2007).

2.4. Technology

Nowadays, technology has changed the way people learn. Benefits of using technology can help learners in various ways. Technology can enhance reflective learning, ideas, critical thinking ability, writing skill, and presentation skill with Blogs. (Ahmad & Lutters, 2011; Lee & Young, 2011; Deng & Yuen, 2013; Cakir, 2013). Wikis can be used as knowledge creation, co-editing of work with multiple authors in collaborative group work. (Leung & Chu, 2009; Lee & Young, 2011; Bowlin, 2012). Group discussion and chat can be adopted as a support tool for sharing knowledge and experience (Baglione & Nastanski, 2007). There are a number of different applications and software to support learning and teaching for enhancing communication within education environment. Therefore, caregivers should consider and select an appropriate application for children to use (Cubelic & Larwin, 2014). Technology can make communication with parents easier (Merkley et al., 2006; Rogers & Wright, 2007). Social media tools, such as, Facebook, can help teacher keep parents informed (Education World, 2013). Learning Management System (LMS) is a software application for classroom management that provide a multi-functionalities including video clip, communication practice using social media categorized by functions and features. This can be real-time interaction, synchronous, and asynchronous tools.

2.5. Communication skills

Communication skills are crucial foundation for early childhood teachers. Verderber & Verderber (2000) define communication skills as ‘goal-oriented actions or action sequence that we can master and repeat in appropriate situations”. Berlo’s SMCR (1960) is a well-known model in communication theory. SMCR refers Sources, Message, Channel, and Receiver. An individual must possess excellent communication skills providing effectively communication and create an impact among the receivers. Effective communication skills are vital for learners and teachers in 21st century skills (Bee, 2012). Therefore, development of communication skills are essential and should be included in early childhood teacher preparation program (Worley et al., 2007; Millipolijak, 2012). Effective communication of teachers are able to transmit knowledge, encourage and motivate children to learn. Moreover, teacher should be able to utilize multiple media and technologies to articulate thoughts and ideas in a variety of forms and contexts for a rage of purposes with families, with children, with peers, and as a professional resource (NAEYC, 2012; The Children’s partnership, 2010). Technology is argued as a potential tool to help teacher engaging, connecting, co-operating with others (Campbell & Scotellaro, 2009; Bowlin, 2012; Morrison, 2014).

This research focuses on the ability of caregivers to communicate effectively with technology in professional setting in the 21st century. The term caregivers refer to adult learners. Not all adult learners have the same type of motivation to learn. Therefore, caregivers need to develop communication skills with work based blended learning and technological scaffolding system. Work based learning can help caregivers to improve their skill and confidence in professional context. Blended learning is a key success of work-based learning as it combines an advantage of face to face and online. Technological scaffolding can support caregivers’ efforts to address learning need. In case of adult learners, the learning scaffolding has pass through their diversity and related task at work. Moreover, technology can help caregivers in various ways such as learning tools, communication tools and scaffolding tools. This enables caregivers to be more flexible and efficient. Therefore, the Work-Based Blended Learning and technological scaffolding system is developed.
3. Methodology

This study focuses on the development of work-based blended learning and technological scaffolding system to enhance communication skills for caregivers under Local Administration Organization in Thailand. The purpose of this study is to propose a proper system:

1) To develop conceptual framework for the work-based blended learning and technological scaffolding system to enhance communication skills in the context of caregivers.

2) To study the experts’ opinions on the system using in-depth interview by face-to-face.

Three phases are included in this study:

Phase I was a review of existing theories and research regarding work-based learning, blended learning, and scaffolding.

Phase II was developing the work-based blended learning and technological scaffolding system in order to enhancing communication skills for caregivers in Thailand.

Phase III was conducted an in-depth interview of ten experts with regard to the developed system. Content analysis is adopted as a technique to analyze the data.

4. Findings

The findings which gained from a synthesis of literature and content analysis about work-based learning, blended learning, and scaffolding, it was apparent that blending of Scaffolding, Work-based learning, and Technology are the key concept for developing the work-based blended learning and technological scaffolding system. The conceptual framework of this research was illustrated in Figure 1.

![Conceptual Framework](image)

Figure 1 Conceptual Framework

Developing of the work-based blended learning and technological scaffolding system for caregivers in Thailand, it found that the system included five components, six steps, and three technological scaffolding. They derived using deductive and inductive approaches gain from a selected review of literature combined with interviewing of the experts of MOI. The developed system has five components as shown in Table 1. The processes of the system are shown in Table 2, it consists of Preparation, Planning, Learning, Discussion, and Evaluation. Technological Scaffolding are Job Aids, Stakeholders and Resources which presented in Table 2.

Table 1 Details of components of the system

| Components   | Details                                                                 | References                                                                 |
|--------------|-------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Job          | Work-task from job description. Learning outcomes derived from a work role or function. | Gallacher & Reeve (2002), Eraut (2004), Linda (2007), Darche, Nayar & Bracco (2009) |
| Learning Activities | Learning activities consists of learning at workplace, online learning and activities within classroom. | Gallacher & Reeve (2002), Eraut (2004), Linda (2007), Darche, Nayar & Bracco (2009), Theerawee & Kittipong (2013) |
| Technology   | System and tools that facilitate learners to access resources. The system consists of Learning tools, Communication tools and Scaffolding tools. | Gallacher & Reeve (2002), Eraut (2004), Linda (2007), Darche, Nayar & Bracco (2009) |
| Evaluation   | This evaluates personal goal, progress of learners toward their achievement. | Gallacher & Reeve (2002), Eraut (2004), Linda (2007), Theerawee & Kittipong |
Key Stakeholders
There are Learners, teachers, and supervisors at workplace. Learners are responsible for planning and managing their own learnings. Teachers are facilitators in classroom and online. Supervisors at workplace provide learners with guidance, mentoring and supports in workplace.

Gallacher & Reeve (2002), Eraut (2004), Linda (2007), Darche, Nayar & Bracco (2009), Theerawee & Kittipong (2013)

Table 2 Process of the system

| Processes | Details |
|-----------|---------|
| 1. Preparation | • Orientation in order to explain concept approach of the system, learning objectives, learning activities and evaluation approach.  
• Communication skills assessment (pre-test).  
• Recall prior knowledge and continue to improve performance. |
| Located in | Class |
| 2. Analysis | • Job and communication analysis in the workplace.  
• Goal Setting. |
| Located in | Class |
| 3. Planning | • Setting Personal Development Plan (PDP).  
• Negotiation PDP.  
• Sign Agreement of PDP. |
| Located in | Class |
| 4. Learning | • Recording and data gathering about communication skill on job in workplace using Blog and scaffolding in LMS.  
• Reflection on the strengths and weaknesses of communication using Blog and scaffolding in LMS.  
• Brainstorming with group using Group discussion, Chat, and Wikis.  
• Redo to improve communication skill in workplace. |
| Located in | Workplace and online |
| 5. Discussion | • Share experiences in Class.  
• Share knowledge within group via online environment  
• Exchange knowledge with peers, teachers, and supervisor |
| Located in | Class, workplace, online |

Table 2 Process of the system (Cont.)

| Processes | Details |
|-----------|---------|
| 6. Evaluation | • Communication skills assessment (post-test)  
• Determination the overall of the system |
| Located in | Class or Online |

Table 3 Technological scaffolding

| Scaffolding | Details |
|-------------|---------|
| Job Aids | Tools that assists learner to accomplish tasks using technological tools such as e-Worksheet, e-Checklist, e-Form, and e-Procedure Guides |
| References | Cagiltay (2006), Lakkala, Muukkone & Hakkarainen (2005), Sharma & Hannafin (2007), Collis & Margaryan (2005), Nielsen (2008) |
| Stakeholders | A person or group of people attempting to motivate, advice, coaching. They can be mentors, colleagues, and experts that communicate through communication technology tools and applications such as e-Mail, webpage, Discussion Board, Chat room, Feed, RSS, Line and Skype. |
| References | Cagiltay (2006), Jiménez & Pantoja (2008), Lakkala, Muukkone & Hakkarainen(2005), Dabbagh(2010), Niamsom,Wainwright, & Graham (2011), Collis & Margaryan (2005), Sharma & Hannafin (2007), Nielsen (2008) |
| Resources | A source or supply that can be used to support or help learners such as video case study and web resources. |
| References | Cagiltay (2006), Jiménez & Pantoja (2008), Lakkala, Muukkone & |
Interviews the experts were held after components of the system, process of the system and technological scaffolding were identified. The interviews were conducted with ten experts with face-to-face interview. Three of them are senior managements of MOI who have more than five years work experiences. Seven experts are university lecturers. They were asked to express how they thought about the system. Some of issues that emerged from the experts are summarized as below:

- Content selection is critical issue in the preparation stage. It includes learners analysis, scaffolding preparation, managing the expectations of caregivers, and preparation of caregiver in the adoption of technology.
- Prior experiences and knowledge in communication of caregivers can be an advantage in engaging with technology. If teachers are able to connect the prior knowledge and experiences of caregivers. It could help caregiver learning to be more effectively.
- Effective time management is vital for the learning system. The experts recommended that the flexibility can lead to better learning. Learner should be able to choose or organize their own learning schedule to meet their available and convenient time.
- Caregivers need to practice and be able to adapt the way to communicate with others in different situations. However, teachers and peers should provide guidance and encouragement on how to communicate in effective way.

5. Conclusion
Communication skills are arguably crucial skill in learning and teaching of 21st century. Nowadays, Information and Communication Technology is widely accepted as being used in a daily life. Little research has looked particularly in developing communication skills for caregivers. As a consequence, this research is interested in the process of how to develop and improve communication skills of teacher particularly early childhood teachers or caregivers. From a synthesis of literature and content analysis about work-based learning, blended learning and scaffolding, five components, six processes, and three technological scaffolding were identified. Some issues have been derived from interviewing of experts about the process and the system. The next stage of our research will focus on how these components, processes and form of scaffolding result to contributes to communication skills improvement.

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