A Review Of Innovative E-Learning In The Airports Of Thailand Public Company Limited

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ABSTRACT

Self-study innovations were developed for learner development by bringing educational innovative technology to support. As a result, learning methods have changed. It also facilitates access to various learning sources which is called "Learning through electronic systems" or E-Learning that can insert strategies, processes, techniques to train learners to be able to think analytically and effectively. This research aimed to examine the components of online learning efficiency of Airports of Thailand PCL. employees by studying the theory of human resource development, self-learning and e-learning. The study found that components of online learning efficiency of Airports of Thailand PCL.employees consist of: (1) Innovation E-Learning, consisting of content, course administration system and learners; (2) Human Resource Management, consisting of training, skill development and rewarding; and (3) Self- Learning , consisting of Learning needs, Learning goal, and Learning evaluation.

Keywords: Innovation E-Learning, Human Resource Management, Employee Learning, Airport of Thailand Public Company Limited

INTRODUCTION

The advancement in technology has caused competition in enhancing learning skills in today's era, stepping into a society of

wisdom and learning. In any case, a country that can move towards a quality knowledge-based society, It is necessary to have quality human resources factors and modern teaching and learning technology to keep up with the changing world. Since the organization is faced with an environment that is constantly changing, in order for employees to be able to work efficiently, it is important that employees know and understand their rights, duties and understanding of work. Every organization has an important goal that is people can work together, perform duties to achieve the goals set out effectively. Self-study innovations were therefore developed for the development of learners which means advances in computer technology and telecommunication technology Learning development in this digital age. Therefore, innovations in education in technology are used to support and facilitate access to various learning sources, a new learning model is called "Learning through electronic systems" or E-Learning that can insert strategies, processes, techniques to train learners to be able to think analytically effectively. The popularity of teaching and learning through computer systems therefore began to gain more popularity. This makes the form of communication through electronic systems widely popular. Today's education training has changed from training that requires the instructor and the trainee to meet face to face at the same time (Synchronous) to self-learning. Due to time constraints, location and other limiting factors, this e-learning model has attracted attention. Communication through electronic systems must take into account the quality of human resources that depend on knowledge, skills and experience that may be insufficient for operations. The development for personnel to have the knowledge and ability to work and cope with changes in various situations to reach the set goals in a timely manner, therefore, it is necessary to use a self-learning package in the form of electronic media that provides opportunities for personnel, develop knowledge skills and attitudes according to competencies and interests.

RESEARCH OBJECTIVE

This study aims to examine the components of online learning efficiency of Airports of Thailand employees.

Electronic Training Components

Thanomporn Laohajaratsaeng (2003, pp 3-5) mentioned four important components of E-learning as follows:

1. Content is the most important element for E-Learning. The quality of the E-learning instruction and whether or not the learner will achieve the learning objectives in this way. Most importantly learning content which the teacher has provided to the students in which the learners are responsible for spending most of their time studying the content on their own, in order to modify the information content that teachers have prepared to become knowledge through invention, analyze with principles and reasons by the learners themselves.

2. Course management system. It is also a very important element for E-learning, including a learning management system which is like a system that collects tools which is designed for the convenience of users in dealing with online teaching. Users can be divided into 4 groups: Instructors, Students, Course Managers, and Network Administrators. The level of access rights provided will vary according to the use of each group. The tools that a learning management system usually provides to users include areas and tools for helping learners prepare lesson material. Space and tools for taking quizzes, questionnaires, managing files. In addition, a complete learning management system provides communication tools for system users whether in the form of electronic mail (Email), Web Board or chat, some systems have provided other special components to facilitate many users, such as providing users with access to view test scores, login statistics in the system, create study schedules academic calendar.

3. Communication mode is to allow learners to communicate with teachers, lecturers, other experts as well as other learners in a variety and convenient manner. There are more than one type of tools provided for learners to use including tools that must be convenient to use. (User-friendly) as well, which tools that E-learning should provide for students.

4. Practice/Quiz

4.1 Providing exercises for learners. The material presented must provide exercises for the learners. Always check for understanding because E-learning is a teaching and learning system that focuses on self-learning of learners. Therefore, it is essential for learners to check whether they understand and are well versed in the subject they have studied on their own.

4.2 Provision of student quizzes. Tests can be in pre-test format, during or after learning. For E-learning, the Learning Management System enables teachers to support teachers' exams in various ways, that is, teachers can design assessments in the form of subjective, multiple choice, correct, wrong, or matching. It also

makes teachers comfortable in exams because the teacher can prepare the exam in the form of an exam warehouse to choose to reuse or revise easily. In addition to calculating and grading, the E-learning system can also facilitate the evaluation of learners because the learning management system will help calculate student scores.

From the components of E-learning mentioned above, it can be concluded that E-learning has 4 important components: 1) Content that corresponds to objectives 2) Course management system that is convenient and fast to use 3) part of communication between students and teachers together both synchronized and non-synchronized; and 4) the practice/test part that students can use to check their knowledge understanding and evaluating learners' learning outcomes

RELATED RESEARCHES

Kanokporn (2010) studied the development of indicators for the success of the teaching and learning system, e-learning for higher education institutions in Thailand. The research found that 1) The success variables of the e-learning teaching and learning system consisted of 5 components: 1) institutions and management. It consists of indicators, philosophy, aspirations and missions, admission support system for teachers and related personnel system for development, support, and student services, budget, infrastructure, and system design management. 2) Instructional design consists of indicators, learning interaction system of care and feedback teaching-learning strategies and teaching-learning evaluation characteristics 3) media and technology. It consists of an indicator of the structure and organization of the teaching and learning system. The quality of teaching materials and development and production of teaching materials. 4) Supporting factors Indicators are libraries and other learning resources, including facilities. 5) Evaluation consists of indicators. Course Evaluation The results of verifying the structural validity of the success measurement model of the e-learning teaching and learning system for higher education institutions in Thailand. They are structurally valid and consistent with empirical data.

Sophak Charoensuk (2011) studied the development of an e-learning design model to develop critical thinking for graduate students, the research found that 1) Components of the e-learning design model for developing critical thinking for graduate students, there are 6 components: 1) online instructors personnel supporting online teaching and online learners 2) course content that can integrate critical thinking skills into

content 3) media and online learning resources in the form of electronic files, ready-made lesson video and audio files. 4) Strategies and techniques for developing critical thinking skills online, including discussion, case studies, Group assignments and reviews by using in conjunction with the graphic layout technique Questioning Techniques and 6 Hats Techniques 5) Learning Management System consists of a curriculum management system, learning promotion system and information management system; 6) physical, mental, social and atmosphere environments to develop critical thinking skills. The steps of the e-learning design model to develop critical thinking skills for graduate students consist of 5 main steps: 1) Course Preparation: Selecting a course Prepare content and learning resources online. and prepare online instructors 2) content design process Strategies, techniques and tools used in e-learning teaching and learning to develop critical thinking skills. 3) Production and development of tools on learning management systems and electronic media used in e-learning management. still, 4) controlling the teaching and learning according to the designed e-learning learning plan, and 5) evaluating and examining the quality and problems that arise as information for improving the e-learning teaching and learning management, e-learning study plan of the sample group designed has the quality of e-learning design and development and in terms of critical thinking skills at a good level (mean = 2.92 and 2.72, respectively). The developed e-learning design model for developing critical thinking skills for graduate students was of very good quality. (mean = 4.00).

Ornicha and Sirapatsorn (2018) studied factors affecting the effectiveness of e-learning among government personnel, and found that 1) The efficiency of e-learning is at maximum level; 2) The characteristics of the participants (In terms of motivation to learn and learning ability) affect the effectiveness of learning via electronic systems of the Office of the Civil Service Commission 3) Factors of design features of electronic learning systems (creating a learning environment application of learning theory design of content presentation and collaboration and sharing) affect the effectiveness of e-learning system. 4) internal environment factors (Opportunity to apply what has been learned) affect the effectiveness of learning through the electronic system of the Office of the Civil Service Commission.

Pitchaporn (2020) studied factors influencing the success of learning through electronic learning (E-learning) case study: Electricity Generating Authority of Thailand (EGAT), the study found that 1) the overall level of learning success through EGAT Online Learning System or EGAT Learning Space (ELS) was at a

high level; 2) different personal factors influenced learning success through the ELS system was not different. 3) The characteristics of the participants influenced the learning success through the ELS system. 4) The work environment factor influenced the learning success through the ELS system.

from the study of components of electronic learning innovation from academics and researchers It can be summarized as Table 1.

Table 1: concept synthesis of electronic learning innovation components

Scholars/Researchers	Components				
	Content	Course Management System	Communication	Evaluation	Learners
Otto Peters (2001)	√	√	√	√	
Khan (2005)	√	√	√		
Annika and ake (2009)	√	√	√		√
Hafize Kaser and Dilek Karahoca (2010)	√	√		√	√
Jung (2021)	√			√	√
Tao Lei (2021)	√	√		√	
Frequency	6	5	3	4	3

From Table 1, it was found that the components of e-learning innovation according to the concepts of academics and researchers, there will be different e-learning innovation components. It can be seen that most academics and researchers will focus on the study of 3 components of e-learning innovation, namely content, course and student management systems as in Figure 1.
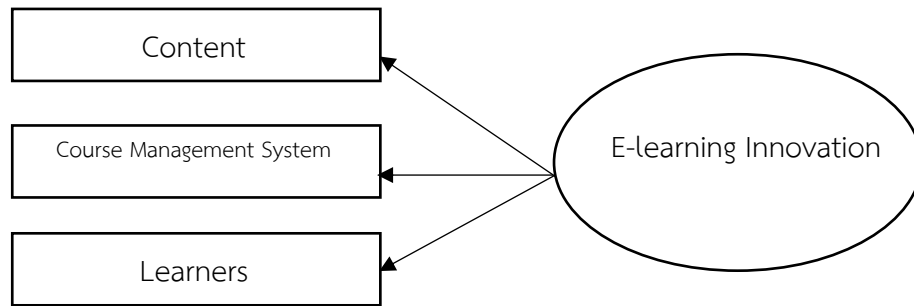
Figure 1: Components of E-learning training

CONCEPTS AND THEORY ON HUMAN RESOURCES

Human resources are valuable factors of society and nation when country has human resources with high potential and can be utilized, that country will prosper and have economic prosperity, politics and society, on the other hand, if any country lacks quality human resources or cannot use it for the benefit of the country, it will be difficult to develop. Therefore, the progress or backwardness of the country depends mainly on the human resource factor. Since human resources are the main factor in the development of other factors such as the economy, politics and society are all derived from human beings, countries, therefore, aim to have efficient human resources to bring maximum benefit to the nation.

Human resource management means the process of managing the personnel of the organization using appropriate strategies. This helps to acquire skilled personnel with knowledge and ability to work with the organization under various processes starting from recruitment, selection, development, compensation ,treatment of people and leaving fair working conditions in order for the organization to achieve the goals.

Leonard Nadler (1980, cited in Chutithorn Harndamrongsuk, 2011, page 11) mentioned 3 components of human resources:
1. Training is an activity that causes learning, focusing on the work currently performed. The goal is to raise the level of knowledge, competence and skills of employees at that time to be able to work in that position. Once trained, the knowledge can be applied immediately.
2. Education is a direct way to develop human resources because providing education increases knowledge, skills, attitudes, as well as strengthens the ability to adapt in every aspect for individuals. If considering the organization, the study will focus on preparing employees for the future, to prepare employees to be ready to work according to the organization's future needs. Alternatively,

scholarships may be used to prepare employees for a new job promotion. which may take a long time

3. Development is the process of improving the organization to be effective. Learning activities that do not focus on the task itself but there is a focus to achieve the changes that the organization wants. The development of the organization will prepare the organization for the future performance of the organization to be in line with the various technologies that occur as well as the various environments that change rapidly.

Invancevich (2007) mentioned that human resource process had 4 aspects: 1. Human resource recruitment 2. Rewarding human resources 3. Human resource development

4. Protection and preservation of human resources

Mondy and Noe (2004) stated that Human Resource Management activities refer to the implementation and implementation of human resource management policies to achieve the objectives set by the organization as follows:

Step 1 Human Resource Planning, Recruiting and Selection

Step 2 Human Resource Development (HRD) consists of education, development training and learning

Step 3 Compensation and Benefits Good compensation will help employees feel sufficient and equal compensation.

Step 4 Health and Safety

Step 5 Employee and Labor Relations. Building a good relationship between employers and employees including the role of labor unions and bargaining with labor conditions in ways that benefit both parties by jointly negotiating with joint support.

Step 6 Human Resource Research. Human resource research is increasingly important. The research can be done in all functions of human resource management, such as studies on recruitment which will give advice about the types of employees that are suitable for a particular organization or research on work safety. This may indicate the cause of work-related accidents.

Somchai Hirankitti (1999) said that human resource management is an activity that helps design work functions by using human resources for maximum benefits and efficiency as follows:

1. Human Resource Plaining is a survey of human resource needs in order to obtain skilled employees with sufficient amount of knowledge and competence to meet the needs of the organization. In addition, when there is a need for human resources, it can be procured immediately. In human resource planning, there must be job design and job analysis, First, for job design, it is the process of defining the structure of the job and defining specific job activities for each employee or group to achieve the goals of the organization. As for job analysis, it is a systematic process for collecting information about job

characteristics, duties and responsibilities including the specific characteristics of the person who is suitable for the job, such as skills, knowledge and abilities that the organization needs in order to perform the work successfully according to the goals of the organization.

2. Recruitment is an activity that organizations use to motivate candidates with knowledge, abilities and attitudes that are consistent with the needs of the organization to apply for the desired job position to help drive the organization to achieve its objectives as set. There are methods used in internal recruitment and methods used in external recruitment.

3. Selection is the process of selecting personnel from the total number of job applicants to search for knowledgeable personnel with ability and attitude best suited to the position and organization.

4. Training and Development for training is an activity that allows employees to learn and upgrade the skills needed to work so that employees can work in line with the needs of the organization lead to the achievement of the set goals. As for the development, it is knowledge provision by making employees knowledgeable in their work. So that employees can develop work skills, resulting in better performance development.

5. Compensation and Benefits Compensation is a reward that employees will receive from work, such as wages, salaries, bonuses. Benefits are rewards that employees will receive because they are members of the organization, such as medical expenses, life insurance, or health insurance.

6. Safety and Health. for Safety is the protection of employees from accidents or dangers arising from work. Health is the physical and mental condition of employees who are not ill and ready for work.

8. Employee and Labor relations. Employees is a valuable resource which the executives must pay attention because the organization will achieve its goals as a result of effective and efficient work of employees, while labor relations is a relationship between the employer and the employee that should be mutually beneficial and supportive.

9. Performance appraisal is a process between supervisors and employees to evaluate the actual performance of employees by comparing the actual results with the standards set and provide feedback to employees so that employees know strengths and weaknesses, and bring the weaknesses to develop to be able to work better.

Human resource development model

The human resource development model of employees is a method that will be used to develop human resources to work efficiently, taking into account the suitability of each organization (Natthira Charoenboon, 2008: 15-16) as follows:

1. Coaching is a way for supervisors to teach subordinates to teach one-on-one. A good supervisor must have the art of speaking and want to pass on knowledge accept differences between people.

2. Games is the creation of simulations to help solve problems. It may be used in the selection and testing of applicants.

3. Cases are a way of giving details of a factual situation. Give trainees the opportunity to test their ideas. Practice skills in analyzing problems.

4. Discussion is the division of training groups into small groups to discuss specific topics.

5. Behavior modeling is the use of videos prepared to show how to solve problems that each person has. Incorporating videos helps individuals to see their flaws. which is one way to develop oneself.

6. In-basket training is a training method that is suitable for executives to see management abilities, such as knowing how to prioritize tasks or knowing how to delegate tasks or not.

7. Internships are hands-on training methods.

8. Role playing is a role play which the trainees will assume duties and try to act according to the simulation.

9. Job rotation is a job rotation or position to increase knowledge and experience.

10. Programmed Instruction is a lesson that is written for learners to learn on their own as if they were being taught in a particular subject by an instructor. After answering the question, you can know whether the answer is right or wrong.

11. Lecture Lectures are used in training to increase knowledge.

12. Apprenticeship Internship

13. Simulators are learning experiences by showing events or stories as realistic as the instructors perform and allow others to observe.

Table 2: Concept synthesis about human resource management components

	Components

Scholars/ Researchers	Training	Education	Skill Development	HR Recruitment	Rewarding	HR Retaining	Health/ Safety
Leonard Nadler (1980)	√	√	√				
Mondy and Noe (2004)	√	√	√	√	√	√	√
Ching Chow Yang (2006)	√		√	√	√	√	√
Invancevich (2007)			√	√	√	√	
Ooi et al (2007)	√		√		√		
Wu, Lin and Lee (2010)	√		√	√	√		
Frequency	5	2	6	4	5	3	2

From Table 2, it was found that the components of human resource management according to the concepts of academics and researchers each of you There will be different HR components. It can be seen that most academics and researchers will focus on the study of 3 components: training, skill development. and awarding as shown in Figure 2
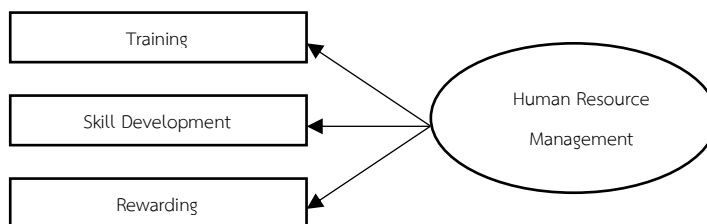
Figure 2: Human Resource Management Components

Concepts and Theory on Self-learning
The modern world has a great advancement in Digital Technology. It makes learning today different from learning in the past. Early learners use teacher-directed learning because all or almost all of the knowledge resides with only one teacher until later the

knowledge contained in the teacher has been recorded and written in More books and books

Mayer (2002) defined the meaning of learning as change in learners' knowledge both quantitatively and qualitatively is the acquisition of knowledge on the basis of learning that occurs from the information gathered by the learners. arrange to be organized into new knowledge in long-term memory so that it can be used as needed

Carol (1963) described the learning success of learners as tt depends on five elements:

1. Analysis of one's own needs. It starts with each learner expressing his or her special needs and interests in learning, to have another friend act as a mentor and another friend took note, doing this circulates until all 3 people have played a full role in 3 aspects, namely the person who needs a mentor and observers. Learning such roles is especially helpful in learning together. Help each other in every way.

2. Set learning objectives. Starting from the role of the learner is important. Learners should study the aims of the subject and then start writing the purpose of studying. Learners should write their goals clearly, understandably, not vaguely, so others can read and understand. Learners should focus on the behaviors they expect. Learners should set objectives that can be measured. Setting the aims of learners at each level. There should be a noticeable difference.

3. Study planning by the students specifying the objectives of the subject Learners should plan their learning activities accordingly. Students must determine their own study plan. Student study planning should start from the learners setting their own learning objectives. The learners are the ones who organize the content to suit the needs and interests of the learners. The learner specifies the method of learning in order to suit themselves the most.

4. Seeking sources of technology is a study and research process that is very important to today's education by each aspect of the learning experience provided, the learner can demonstrate the purpose, meaning and achievement of that experience. Resources such as libraries, temples, health centers can be appropriately used. Choose the right resources for each learner are allocated well and appropriately. Some of the activities will be managed by the students themselves and some of them are joint activities between teachers and students.

5. Evaluation is an important step in the process. Self-learning helps learners to know their own learning progress as well. The evaluation must be consistent with the objectives. It involves the following: knowledge, understanding, skills, attitudes

and values. The objective is clear do everything to achieve the objectives. This step is important in evaluating teaching and learning, collect evidence. Evaluation decisions must be based on complete and reliable information, collect information before class to compare after class how much the learners have progressed and source of information. Information from teachers and learners will be mainly used for assessment.

Skager (1978) described seven characteristics of self-learners as follows:

1. Self-Acceptance means having a positive attitude towards oneself.

2. Playfulness, which has the important characteristics of knowing their learning needs set goals that are suitable for oneself in accordance with the needs set and an effective plan help achieve the objectives of the course.

3. Intrinsic Motivation. Learners who have self-motivation to learn are able to learn without external control such as rewards, reprimands, penalties, learn to obtain a certificate or position.

4. Internalized Evaluation: The ability to evaluate themselves on how well they will study. They may ask others to evaluate their learning outcomes. The learner must accept the external assessment as correct only if the assessor has independent thinking and the assessment is consistent with what appears to be true at that time.

5. Openness to Experience. Learners who bring their experience into new activities may reflect learning or goal setting. This may be necessary as a reason for moving on to new activities, knowledge, tolerance for ambiguity, a liking for difficult things and learning to have fun motivation to do new activities and create new experiences as well.

6. Flexibility in learning may reveal a willingness to change goals or learning methods and use a problem-solving system. using exploration skills trial and error. This does not indicate a lack of willingness to learn. Failure is more likely to be corrected than given up.

7. Autonomy. Self-managed learners choose to commit to a particular learning style. These individuals are able to question standards of time and place in order to see what aspects of learning are valuable and acceptable.

Thongchan Hongladarom (1988) stated that self-directed learning is a learning process that learners initiate to seek. Elements of self-directed learning with or without assistance from others These components include Learning Needs, Learning Goals, Learning Strategies, Motivation, and Learning Evaluation.

Table 3: Synthesis of the concept of individual learning components

Scholars/ Researchers	Components				
	Learning needs	Learning goal	Learning strategies	Motivation	Learning evaluation
Knowles (1975)	√	√	√		√
Skager (1978)	√	√		√	√
Gulielmino (1977)	√	√	√		
Brookett and Hiemstra (1991)	√	√			√
Candy (1991)	√	√			√
Hiemstra (1994)	√	√			√
Garrison (1997)	√	√		√	
Kurbaogu (2003)	√	√			√
Teo et.al. (2010)	√	√			√
Frequency	9	9	2	2	7

From Table 3, it was found that the individual learning components according to the concepts of academics and researchers, there will be different individual learning elements. It can be seen that most academics and researchers pay attention to the study of 3 components of personal learning: self-determination; Learning planning and learning evaluation as shown in Figure 3.
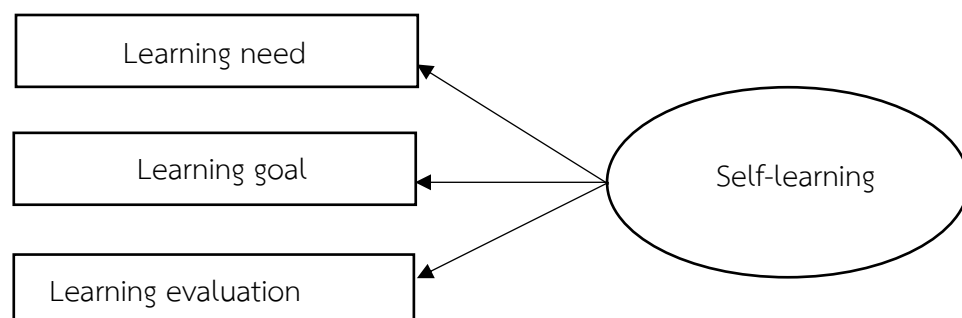
Figure 3: Components of Self-learning

Conclusion

After revision of concepts and theories of electronic learning, self-learning and e-learning, the researcher concluded that human resource development involved in life-long learning and technology helps in the learning process of the employees as they may be available at different time and place and they may have different needs in learning. Therefore, the components of online learning efficiency of Airports of Thailand employees by studying the theory of human resource development, self- learning and e-learning. The study found that components of online learning efficiency of Airports of Thailand employees consist of: (1) Innovation E-Learning, consisting of content, course administration system and learners; (2) Human Resource Management, consisting of training, skill development and rewarding; and (3) Self- Learning , consisting of Learning needs, Learning goal, and Learning evaluation.

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