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How to Use E-Learning to Increase Job Satisfaction in Large Commercial Bank in Bangkok

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***Abstract*—**Many organizations bring e-Learning to use as a tool in their training and human development department. It is getting more popular because it is easy to access to get knowledge all the time and also it provides a rich content, which can develop the employees' skill efficiently. This study is focused on the factors that affect using e-Learning efficiently, so it will make job satisfaction increasing. The questionnaires were sent to employees in large commercial banks, which use e-Learning located in Bangkok, the results from multiple linear regression analysis showed that employee's characteristics, characteristics of e-Learning, learning and growth have influence on job satisfaction.

***Keywords*—**e-Learning, Job Satisfaction, Learning and growth.

I. Introduction

AS internet is used widely, it has created many opportunities and applications to support many activities. E-Service is one of them, which include e-Learning [12]. Especially with the concerns about learning and growth concept, many people need to get knowledge as soon as they need [26]. This leads to the importance of e-Learning for developing or enhancing the ability and skills of people, especially in business sectors. That is the reason, why many organizations brought e-Learning to train their employees for ensuring the company's growth [4]. Also e-Learning helps updating the employees skill fast [25]. However, this study found that it did not guarantee that using e-Learning could enhance skills and capability of all employees [6]. Because of this finding, there are many researches about factors that related to use e-Learning efficiently [11], [12], [17], [19], [22], [23].

Most studies focused on factors that have affected using e-Learning successfully in different environments and purpose. However, based on the limited purpose of using e-Learning to support the learning and growth of the company, it is interesting to study further about how the result of using e-Learning affects the learning and growth indicator of the company. In this study, job satisfaction is chosen to represent learning and growth concept. It also has an effect on other aspects like internal process and customer aspects of Balanced Scorecard concept. The results provide the managers to make right decision for bringing e-Learning to use in their companies.

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II. Literature Review

A. e-Learning Systems

All present, e-Learning is used widely as internet is spread with more and more speed. It provides a new pattern for learning and also it provides more opportunity to learn [18]. It supports continuing learning and self-improvement without interfering with working patterns and life styles, because everyone can access the contents all the time and from every place. For contents, it provides the up to date contents all the time. So it can be considered as an efficient tool to increase working performance and everyone's capability [9].

There are many factors found to be related to the use of e-Learning efficiently, such as learner satisfaction, tutor quality, quality of e-Learning systems, characteristics of e-Learning systems, self-efficacy, motivation, learner support, instruction, learning platform, interaction, content, course design, interaction pattern, personal capability, etc. [3], [22], [24]. To evaluate the efficiency of e-Learning systems, balanced Scorecard (BSC) developed by [15] is brought to be adopted, especially in learning and growth aspect because this aspect focuses on employees. It suggests that high capability employee can generate high performance of the company. The good motivation to increase skills and capabilities is important [13]. The characteristics of e-Learning systems, and learning and growth environment might promote good motivation.

B. Job Satisfaction

There are many researches about job satisfaction and also many definitions [7], [20]. In this study, job satisfaction is defined as feeling or attitude about working success. The positive attitude in working success leads to the efficiency of working processes and results. Reference [2] stated that perceived usefulness of training has effect on intending perceived satisfaction in working. Also [1] found that learner's satisfaction is the major factor for distance learning. Learner's satisfaction related to media, content and learning process.

III. Hypotheses and Research Framework

There are many researchers studied about factors that affect e-Learning. Also, there are studies about how e-Learning or characteristics of e-Learning that affect the learning performance, such as e-Learning systems, learning styles, motivation, attitude, etc. [11], [14], [17], [18], [25]. Some factors relate to characteristics or behavior of learners. It is interesting to study the learners' ability or attitudes toward learning through e-Learning systems. The ability, the readiness or attitudes should drives an effect on personal's learning and development, which stated by H1. The other

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factor found is the characteristic of e-Learning systems, which levels ability of the systems in user's perspective.

Many researches found the efficiency of e-Learning systems gave an effect on learner satisfaction. Learner interface, learning community, content, personalization, teaching idea are the example of e-Learning systems characteristics [8], [12].

e-Learning systems itself has an effect on level of learning and development that users gain after learning through the e-Learning systems, This relationship is shown in H2.

Reference [13] studied about the relationship between efficiency of e-Learning systems and job satisfaction, which considered as a part of learning and growth perspective in Balanced Scorecard (BSC) concepts. If learners accepted the efficiency of training, they will develop effective work. This might come from the level of commitment or motivation, which gets higher than before. It is possible to consider commitment or motivation as a part of learning and development concept. The higher commitment or motivation is the higher job satisfaction is [2]. This is interesting to find the effect of Learning and development on job satisfaction, as stated in H3.

From above information about e-Learning systems, learning satisfaction and job satisfaction, the research frame work can be developed as follow.

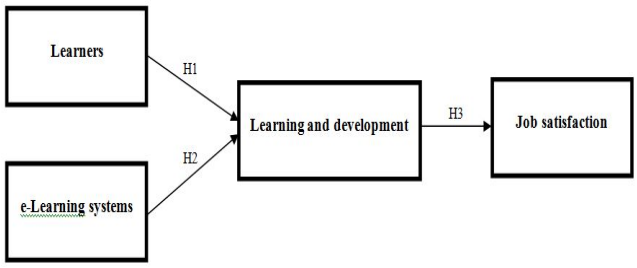


Fig. 1 Research Framework

H1: Learners have an effect on learning and development H2: e-Learning systems have an effect on learning and development H3: Learning and development has an effect on job satisfaction.

IV. Research Methodology

This study uses questionnaires for collecting data. The questionnaire has 5 parts. Part one was demographic data. Part two was Learners that was developed based on [16], [21]. Part three was e-Learning systems that were developed based on [12]. Part Four was learning and development that was developed based on [19]. Part five was job satisfaction that was developed based on [20]. Reliability was evaluated by assessing the internal consistency of the items representing each factor using Cronbach's alpha. The instrument had a reliability of 0.956. The coefficient alpha values for learners, e-Learning systems, learning and development and Job satisfaction were 0.919, 0.918, 0.875, and 0.894 respectively (Table I).

TABLE I
Reliability Statistics

Topic	Cronbach's Alpha	N of Items
Learners	0.919	11
e-Learning systems	0.918	15
Learning and development	0.875	5
Job satisfaction	0.894	5
Total	0.956	36

The survey comprised questions on demographic data and 36 items covering the 4 variables of in this study (learner, e-Learning systems, learning and development, job satisfaction). Each item was scored using a 5-point Likert scale where 1 = strongly disagree and 5 = strongly agree and use multiple linear regression analysis for study.

V. Results and Discussion

The descriptive analysis about the opinion of learners, e-Learning systems, learning and development, and job satisfaction are mentioned. Based on 5-Likert's scale, the average scale range 1.00-1.49 is considered to be very low level; 1.50-2.49 is considered to be low level; 2.50-3.49 is considered to be moderate level; 3.50-4.49 is considered to be high level and 4.50-5.00 is considered to be very high level [5].

Table II shows the analysis results about the learners. The total average opinion level is 3.80, which considered being high level. This means that learners have high attitude to develop themselves and focus on self-learning effectively [3]. Moreover, there is a good attitude to do self improvement using e-Learning systems.

TABLE II
The Analysis Results about the Learners

Learners	$\bar{x}$	S.D.	Opinion Level
1. Would you like to learn the contents of the e-Learning system of special interest?	3.96	0.763	High
2. If the results of learning with e-Learning system was not satisfactory. You will change learn for development.	4.00	0.745	High
3. You are responsible for learning with e-Learning system effectively.	3.91	0.758	High
4. You have the ability to prioritize their learning with e-Learning systems as well.	3.86	0.760	High
5. You enjoy learning with e-Learning.	3.79	0.842	High
6. E-Learning systems have effect in changes your learning.	3.88	0.760	High
7. You have the ability to control your learning with e-Learning system as well.	3.78	0.779	High
8. You will be back review e-Learning content always.	3.52	0.861	High
9. You succeeded in ranking the importance of learning with e-Learning systems always.	3.76	0.749	High
10. You can arrange a time to learn with e-Learning systems effectively.	3.79	0.824	High
11. Would you like to learn new things? From courses in e-Learning system to support your learning.	3.85	0.781	High
Total	3.83	0.560	High

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Table III shows the analysis results about e-Learning systems. The total average opinion level is 3.84. This means that the quality of e-Learning systems can support the efficiency of learning process, so the learners can plan to access the knowledge properly. The activity for exchange information sharing among colleagues during learning process is supported by the e-Learning systems that cause the efficiently and successfully learning ability [10].

TABLE III
THE ANALYSIS RESULTS ABOUT E-LEARNING SYSTEMS

e-Learning systems	$\bar{x}$	S.D.	Opinion Level
1. E-Learning systems of organization are convenient and easy to use	3.85	0.802	High
2. E-Learning of organization can provide content easy understand.	3.83	0.795	High
3. Process of e-Learning systems have effective.	3.80	0.750	High
4. E-Learning allows you to find the content to be learned quickly and easily. And easy access to contents.	3.85	0.741	High
5. E-Learning allows you to take questions from the lessons to discuss with colleagues.	3.85	0.752	High
6. The e-Learning has forums (Web Board) or network community. Or channel of communication for the exchange of information of the personnel in the organization that is easily accessible.	3.74	0.770	High
7. If there are any questions from learning with e-Learning, you will be able to put questions in the lesson to talk or discuss with the instructor is easy.	3.64	0.866	High
8. The system of e-Learning allows you can share knowledge with the people in the organization convenient and easy through Web Board or network community or channels of communication.	3.77	0.805	High
9. Lesson of e-Learning systems is up to date.	3.91	0.755	High
10. The contents of the e-Learning system are appropriate and meet your needs.	3.91	0.749	High
11. E-Learning has managed the lesson enough for your needs.	3.79	0.716	High
12. E-Learning systems will help you to can learn the content you want.	3.89	0.692	High
13. E-Learning system allows you to choose what they want to learn.	3.91	0.689	High
14. E-Learning system allows you to control the progress of learning.	3.88	0.733	High
15. E-Learning system is recording the progress of learning and your score.	3.97	0.710	High
Total	3.84	0.543	High

Table IV shows the analysis results about learning and development. The total average opinion level is 3.90. This means that learners have a high attitude for using e-Learning systems. Self-improvement, creating my knowledge or efficiency of working can be enhanced by e-Learning systems [10].

Table V shows the analysis results about job satisfaction. The total average opinion level is 3.90. This means that the employees have a high attitude about the benefits of e-Learning systems. It shows that e-Learning systems help employees receiving new knowledge and apply to use in their jobs. The job satisfaction level is increased due to the employees work more effectively and efficiently [10].

TABLE IV
THE ANALYSIS RESULTS ABOUT LEARNING AND DEVELOPMENT

Learning and development	$\bar{x}$	S.D.	Opinion Level
1. You can remember the lesson of e-Learning systems as well.	3.75	0.705	High
2. Learning with e-Learning systems allows you can develop your work faster.	3.88	0.719	High
3. Learning with e-Learning systems provides you with more knowledge.	3.97	0.696	High
4. Learning with e-Learning system allowing you to manage your job better.	3.93	0.750	High
5. Learning with e-Learning systems allows efficiency of your work better.	3.97	0.735	High
Total	3.90	0.599	High

TABLE V
THE ANALYSIS RESULTS ABOUT JOB SATISFACTION

Job satisfaction	$\bar{x}$	S.D.	Opinion Level
1. You can bring the knowledge of learning with e-Learning system used with your work. Makes you proud of your work.	3.87	0.746	High
2. You can bring the knowledge of learning with e-Learning system used with your work. Make you aware of the success in your work, always.	3.86	0.692	High
3. You can bring the knowledge of learning with e-Learning system used with your work. So that makes you feel satisfied with the success of the work.	3.88	0.765	High
4. You can bring the knowledge of learning with e-Learning system to use fully so that you can achieve the target.	3.93	0.750	High
5. You can bring the knowledge of learning with e-Learning system used so that you feel a part in the success of the organization.	3.94	0.779	High
Total	3.90	0.642	High

The results from multiple linear regression analysis showed that both learners and e-Learning systems have impacts on learning and development, with significant level at $\alpha = 0.05$, $R^2 = 0.598$, $F = 471.148$, p-value = 0.000. The results lead to accept H1 and H2 (Table VI), which mean that learners have an effect on learning and development.

TABLE VI
RESULTS ANALYSIS ON LEARNERS AND E-LEARNING SYSTEMS THAT INFLUENCE LEARNING AND DEVELOPMENT

Variable	b	SEb	β	t	p-value
Learners	0.268	0.043	0.251	6.183	0.000
e-Learning systems	0.619	0.045	0.561	13.825	0.000
Constant = 0.494; $SE_{est} = 0.112$					
R=0.774; $R^2 = 0.598$; F = 471.148; p-value = 0.000					

Also, e-Learning systems have an effect on learning and development. The findings relate to [17] which stated that good attitude and trust to the e-Learning systems is very important, along with sufficient of functions and availability of the e-Learning systems to make e-Learning successful. Also [14] showed that learners and perceived usefulness of e-Learning systems related to e-Learning efficiency and the success of e-Learning systems. Also the result from the analysis of the impact of learning and development on job satisfaction, using simple linear regression, suggests that these is an impact at statistical significant level, $\alpha = 0.95$, with $R^2 = 0.555$, $F = 788.822$, p-value = 0.000. This finding leads to

accept H3 (Table VII), which means that learning and development has an effect on job satisfaction. The result relates to [3] that the on line learning efficiency is important, while the e-Learning systems efficiency depends on learner's satisfaction.

TABLE VII
RESULTS ANALYSIS ON LEARNING AND DEVELOPMENT THAT INFLUENCE JOB SATISFACTION

Variable	b	SEb	β	t	p-value
Learning and development	0.798	0.028	0.745	28.086	0.000
Constant = 0.782; SE_{est} = 0.112					
R = 0.745; R^2 = 0.555; F = 788.822; p-value = 0.000					

Table VII shows that learning and development has an effect on job satisfaction. As mention above, this effect can happen because of the level of attitude of the learners might be high, also the quality of e-Learning systems [17]. Both efficiency of the e-Learning systems and attitude lead the efficiency of learning and development [11].

VI. CONCLUSION

The results from the analysis support all the research hypotheses, which mean that learner and e-Learning systems have effect on learning and development. In relation, learning and development have impact on job satisfaction. For using e-Learning to train the employees, companies need to prepare their employees to be ready, familiar with the technology and be focused to continue using it. Also the attitude about self-improvement is important to the learning and development's efficiency, which will lead to get high employee's job satisfaction.

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