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CREATING COMPETENCY-BASED TRAINING COURSE FOR PAD PRINTING

Suppawan Pankohlerng

Department of Printing Industrial, Faculty of Industrial Technology,

Suan Sunandha Rajabhat University, Bangkok, Thailand.

E-Mail: suppawan.pa@ssru.ac.th

ABSTRACT

This research was aimed for 1) To find out the quality Competency-based Training Course for Pad Printing. 2) To establish the efficiency of the training curriculum for Pad Printing Technician Operator in an Organization. The sampling group for this research were included 20 Pad Printing Technician Operator in an Organization who worked for printing industry organizations, it was found that 1) The results indicate that the quality of professional courses (the objective of the course, the teaching and learning, and assessment) the average was 4.56 in all 3 shows that the development of competency based training course for operator is very good. 2) The efficiency of training curriculum is 89.9/87.3% which met the standard level that was 80/80%.

Keyword: Competency, Pad, Training

INTRODUCTION

According to survey's information in 2016, there were 2,463 registered printing houses which can be calculated as 90% of all printing house in Thailand. 74% of them were in Bangkok and sub-urban. Other printing houses were spread in other regions of the country. Workers in printing and packaging industry were around 160,000 people. Researcher found that only 10% of them specifically possessed the degree in printing. Therefore, problems regarding lack of knowledge and skill development were existed in the industry. These facts pointed out that printing industry confronted difficulty in area of specialist (Pakamas Pajonkleaw, 2016)[1] which also affected other industries, respectively. In aspect of printing industry, lacking of specialist in the area led to employment of unrelated skilled workers which increased the risk of damage in production line. In fact, students whose major was printing possessed ability to work though they were still in a college. After graduating, additionally, they had a possibility to generate higher income than others. Moreover, some printing houses also grant a scholarship to prospect students who were interested in studying printing major. Not surprisingly, printing industry was rated as 1 of 15 creative industries for free-trade in AEC 2015 which the flow of merchandise, investment, and labor were agreed upon.

Therefore, human resourced development was the urgent issue (Natthapong Limjitti, 2017)[2] It was important to develop workforce to directly serve the requirement of business area. As a result, efficiency and high competency workers would play the crucial role in development of the country, as well as, tremendously decreased production damages (Wichai Payacaso, 2016).[3]



Figure 1 Pad Printing

Pad printing system, in the past, immensely required labors due to the lack of Pad Printing Technician Operator in an Organization. The task needed someone with state of Pad printing system to complete a quality printing; however, such people rarely existed in the industry. These factors led to inefficiency in practice. In addition, at present, newly graduated workers were lack of skills and knowledge which greatly affected the industry. Therefore, improving the quality of printing workers in order to meet the requirement of industry was key issue to be acknowledged by other countries and can be competed to other workers at domestic and international level (Somkeit Chayasriwong, 2018).[4]



Figure 2 Pad-Print-Department

Basing on relation in curriculum theory and educational theory, the educational one related to policies regarding experiences in schools, while curriculum theory was only the branch that support educational theory which was important as to other theory relating to education management (Scimovie, 2018).[5]

OBJECTIVE

- 1) To find out the quality Competency-based Training Course for Pad Printing.
- 2) To establish the efficiency of the training curriculum for Pad Printing Technician Operator in an Organization.

METHODOLOGY

The details of the procedures were as follows;

- 1) To analyze the data, study and collect knowledges regarding to a training curriculum in order to get as much detail as possible.
- 2) Design and development of training courses (Wichai Wongyai, 2016: 65)[6], create outline the training curriculum by specifying the following configurations including main goals, objectives, contents, training methods, training materials, period, and evaluation and measurement. Develop research tools to be used in training curriculum on production for Pad Printing Technician with consult from the experts together with evaluation on the training quality training curriculum, and learning plan for each training unit, the curriculum to meet the set standards at 80/80 with 4 multiple choices.
- 3) Bring the curriculum into try out on 10 people (Wat Ploysri, 2015: 36-37).[7] Then obtain any error and mistake incurred to improve the curriculum again before it was sent out for the complete final printing. This was to achieve in revamping the curriculum to meet the set standards at 80/80. The scores from the test result both before and after the training were used for such consideration (Chaiyong Brahmawong, 2013: 6)[8]
- 4) Operation training curriculum the period took 3 days, 24 hours in total. The selected sample quantity was 20 people.
- 5) Assessment training.

RESULT

1) The improved training curriculum showed contents about manufacturing of printed curriculum and activity works. These works were evaluated and approved by the experts, and they contained 10 units as follows;

- Unit 1 Introduction to Pad Printing
- Unit 2 Pad Printing Inks
- Unit 3 Prepress
- Unit 4 Substrates
- Unit 5 Printing Presses and Printing Systems
- Unit 6 Drying Methods
- Unit 7 Products of Print Finishing
- Unit 8 Print Quality
- Unit 9 Maintenance Pad printer
- Unit 10 Pad Printers and Security Printers to Work With

Table 1: Summary of quality evaluation in aspect of training course by curriculum specialist.

Items	Mean	Quality Level
Course Objectives	4.52	Very Good
Instruction	4.52	Very Good
Assessment	4.64	Very Good
Mean(of all aspects)	4.56	Very Good

2) Efficiency result of the curriculum

Efficiency results of training course during learning period of each module by sample was defined as Printing Technician Operator in an Organization who worked for printing industry organizations in Bangkok metropolitan area. They had experience in Printing for less

than 2 years and had never studied or learnt about the Pad printing. They also had intent to cooperate with researchers to carry out this research through the method of Simple Random Sampling. The selected sample quantity was 20 people. Then identify the values of E_1/E_2 from the test units, each unit had 20 sections, in total 200 sections. Additionally there was a post-test divided in 100 sections. The results from all of the tests were shown below.

Table 2: Efficiency Results Of Training Course During Learning Period Of Each Module

Items	Attendants	Full Score	Total Score ($\sum x_1$)	Efficiency
Test score during learning period of each unit (E_1)	20	100	1,798	89.9

Table 3: Efficiency of Curriculum in Post-Training

Items	Attendants	Full Score	Total Score ($\sum x_2$)	Efficiency
Final post-test score (E_2)	20	100	1,746	87.3

From the table 2 and the table 3, the efficiency values of E_1/E_2 were 89.9/87.3 they were higher than expected (80/80 was the expected value from the researcher). This indicated that the efficiency values were the success indicator for the curriculum and could be used for the sampling group.

CONCLUSION AND FUTURE WORK

Competency-based training course for pad printing in Bangkok was evaluated by the experts in terms of contents and curriculum development. The curriculum consisted of 10 academic units including; unit 1 Introduction to Pad Printing, unit 2 Pad Printing Inks, unit 3 Prepress, unit 4 Substrates, unit 5 Printing Presses and Printing Systems, unit 6 Drying Methods, unit 7 Products of Print Finishing, unit 8 Print Quality, unit 9 Maintenance Pad printer and unit 10 Pad Printers and Security Printers to Work With Furthermore, there was a test at the last session of each unit that the sampling group was required to do. This was to find the efficiency result of the training curriculum. There was also pre-test and post-test in order to obtain the learning results from the trainees. Such examination used on the tests came from the test warehouse picked based on behavioral objectives of the lesson. It also was well used to evaluate in accordance with the section objectives.

The results from the efficiency of the curriculum showed the value as 89.9/87.3% which was higher than initially expected. This meant that the built curriculum was with high efficiency, and could be brought into use with the sampling group.

For the future work;

- 1) Results of research and creating competency based training course for pad printing can also be applied to different courses.
- 2) Further research and development in training course should be done in order to improve an attitude with regards to organization including attitude evaluation.
- 3) In curriculum designing process, customers' requirement should be taken into account so in order to increase competency of worker and catch up with technology.

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