A development of a practical training course to enhance lecturers' potentiality in educational subject in Bachelor of Science in Technical Education

Songnakorn Karnna[1*] and Surat Promchun[1]

Abstract

The purpose of this research was to develop and assess a suitability of the practical training course to enhance lecturers' potentiality in the educational subject in the Bachelor of Science in Technical Education. The research process commenced from a study of concepts, theories and related research about a development of a practical training course, generating technical teachers roles and educational subject teachers' functions was analyzed and synthesized to be a draft manual which consisted of 12 components. Then, the components of lesson plans are created from 18 topics of Training topics. Next, a practical training course's manual is created. This manual consists of three parts; part 1: training practical course, part 2: lesson plan and part 3: appendix. Afterwards, an assessment of the suitability form for the practical training course is created. This assessment form uses the five scale-rating technique. Data was collected from the assessment of the qualifying criteria, 7 experts that were composed of the lecturers who have experience in teaching practical education course, or a related course in Bachelor of Science in Technical Education and development of training courses. The obtained data is analyzed for means and standard deviations. The results found that the suitability of a practical training course in overall was at high level. Therefore, it can be concluded that the developed practical training course has acceptable quality and can be implemented to train the lecturers' potentiality in educational subjects.

Keywords: development of practical training course, lecturer, educational subject

[1] Department of Teacher Training in Mechanical Engineering, Faculty of Technical Education, King Mongkut's University of Technology North Bangkok, Bangkok 10800, Thailand

[*] Corresponding author. E-mail: songnakorn@hotmail.com, sprkmutn@gmail.com

Introduction

National Education Act B.E. 2542 (1999) and Amendments (Second National Education Act B.E. 2545 (2002)) aims at the full development of the Thai people in all aspects: physical and mental health; intellect; knowledge; morality; integrity; and desirable way of life so to be able to live in harmony with other people. The vocational education aims to provide students with the knowledge and skills in their professional career. The goal is to develop the students to have the knowledge and skills in the Basic vocation, the specific vocation and the good attitude to the profession. Therefore, vocational education management has the main objective to create and develop personnel with the skills, techniques and technological proficiencies that allow them to meet the professional standards and the needs of all businesses (Royal Thai Government Gazette, 2008). Meanwhile, teachers who have knowledge and ability in teaching, and have the skills to work in the profession to teach are the important elements that enable students to succeed in studying (Arpha-adul *et al*., 2011).

The Bachelor of Science in Technical Education, Faculty of Technical Education, Rajamangala University aims to produce teachers of vocational education, with the knowledge and skills to do the training, teaching and technological knowledge meet the needs of career education (Faculty of Industrial Education and Technology, 2010). Therefore, producing a good quality student teacher must have a competency in teaching skill criteria. That is, the capability to organize teaching and learning activities that result in knowledge, skills and personal attributes that are caused by learning both theory and practice of the teaching in the Bachelor of Science in Technical Education. The most important factor that affects the competency of teaching skill on student teacher to be a teacher professional, is the lecturers in the educational subject who will be teaching and learning activities to make the student learned and skilled until they can competency in teaching skills.

The study of problems of the practice of professional experience teaching and the solutions for future improvement of student teachers leads to the findings that each instructor has different recommendations, replacement teachers during the preparation, rehearsal and observation of actual teaching, as well as scoring standards. These things make the students receive guidance that is different (Hinon, 2015). The study of the problems of lecturers in the educational subject who experienced in teaching and lesson plans found that lecturer should teach the content duplicated, teaching a

theory rather than practicing. In addition lecturers who come from various institutions make the teaching and learning that are not aligned. Therefore, there should enhance lecturers' potentiality in the educational subject to understand the production of technical teaching in the same direction. The inquiry found that lecturers need to increase their knowledge and skills in preparing to teach, teaching practice, measurement and evaluation of teaching in the same direction. There are a consistency and coherence in individual subjects. The redundant content cannot be integrated during the subjects that affect the competency in teaching skills of student teachers.

The development of enhancing the lecturers' ability is very important which have a variety of ways, such as further education, training, coaching, supervision, consulting, assignment (Ponlakon, 1989). Training is the most popular technique to enhance lecturers' ability. Therefore, it will have to develop a training course at a specific training program in a short time to support the work either (Promchun, 2010). A development of a training course process consists of 6 steps, i.e., 1) analyzing of training needs, 2) establishing training objectives, 3) selecting and designing training project, 4) establishing the criteria for evaluation, 5) training and 6) training evaluation (Smithikrai, 2013). With the concern about the aforementioned points, the researcher, develop the practical training course to enhance lecturers' potentiality in the educational subject in Bachelor of Science in Technical Education (five years) in order to appoint lecturers in the educational subject who have knowledge and skills which is about the preparation of a plan of studying that has the consistency, coherence of educational subject, preparing a lesson plan, teaching practices with a focus on the activity, measurement and evaluation of teaching and the supervision which can enhance lecturers' potentiality in the educational subject to be able to manage the teaching quality and efficiency affects student's competency in teaching skills which used in teaching aspects of vocational education.

Methodology

The steps of a practical training course development for enhancing the lecturers' potentiality in the educational subject of the Bachelor of Science in Technical Education were as follows.

1. To study concepts, theories and related research on development of a practical training course, generating technical teachers, roles and educational subject teachers' functions were analyzed and synthesized to be a draft training

course which consisted of 12 components: 1) the title of the course 2) the introduction 3) the course objective 4) the training topic 5) the course standard 6) the qualification of the trainees 7) the schedule of the course 8) the quantity of the trainees per course 9) the qualification for lecturers 10) the facilities 11) the passing conditions and 12) the course management.

2. To study concepts, theories and related research about education management to produce the technical teachers and the expert advisor which were analyzed and synthesized to create the component of lesson plans includes the lesson plan, the information sheet, the activity sheet, the evaluation activity sheet and the teaching aids which included 18 topics of Training topics; 1) the course of doing lesson plan, 2) the learning and behavioral level, 3) the instructional step, 4) the subject of teaching program, 5) the composition of the behavioral objective, 6) the guidelines for writing the behavioral objective, 7) the analysis and generate information sheet, 8) the teaching activity (Motivation), 9) the teaching activity (lecture), 10) the teaching activity (questioning), 11) the analysis to select teaching aids, 12) the work sheet/test Sheet, 13) the activity sheet and evaluation sheet, 14) the design and the creation lesson plan, 15) the measurement and evaluation, 16) the application and progress, 17) the supervision of teaching and 18) the supervision of questioning practice.

3. To create the manual for the practical training course to enhance the lecturers' potentiality in the educational subject on the Bachelor of Science of the Technical Education which consists of three parts; 1) the training practical course, 2) the lesson plan and, 3) the appendix.

4. To create the research tool as follows. 1) the assessment of the suitability form, 2) the suitability form with five rating scale consisting of five parts as follows; 1) the evaluator's personal information, 2) the assessment of the suitability of practical training course, 3) the assessment of suitability of lesson plan, 4) the assessment of suitability of appendix and, 5) the suggestion. 3) the evaluation tools for evaluating manual of the practical training course. The samples included 3 research experts from Rajamangala Universities. The result revealed that the validity, the IOC values of the assessment of the suitability form are 0.6-1.00.

5. To define the assessor of evaluating manual for the practical training course, the samples are 7 people that were composed of lecturers who have experience in teaching on the practical education course, or a related course in Bachelor of Science on Technical Education and development of training courses,

5 people were from the Faculty of Technical Education at the King Mongkut' s University of the Technology North Bangkok and 2 people were from the Faculty of Technical Education at Rajamangala Universities.

6. To collect the data from the assessment of the qualifying criteria. After the evaluators are appointed, the plan of the practical training course and the assessment forms are presented to each of them in the personal manner so that they can receive a detailed explanation about the course, which will enable them to understand how they can assess the course.

7. To analyze the data by using the mean and standard deviation and interpreted with the following criteria.

mean	suitability level
4.51 – 5.00	very high
3.51 – 4.50	high
2.51 – 3.50	moderate
1.51 – 2.50	low
1.00 – 1.50	very low

Concerning to the conclusion of the research findings, it is granted that the training course has acceptable quality that enables to be further implemented which the mean of the scores is 3.51 (high level) or upward.

Results and discussion

The practical training course to enhance the lecturers' potentiality in the educational subject consists of 3 parts; 1) the training practical course with 12 components, 2) the component of the lesson plan includes lesson plan, information sheet, activity sheet, evaluation activity sheet and teaching aids with 18 topics of training topics and, 3) the appendix includes the forms of training and the self assessment for trainees.

The results of the assessment of the suitability of the practical training course to enhance the lecturers' potentiality of the educational subject in the Bachelor of Science in Technical Education were shown in (Table 1-5).

Table 1 The suitability of the practical training course's manual in Total and of each part.

n=7

item	$\overline{x}$	S.D.	suitability level
part 1 : practical training course	4.39	0.58	high
part 2 : lesson plan	4.43	0.70	high
part 3 : appendix	4.57	0.51	very high
total	4.42	0.68	high

The (Table 1) illustrated that the suitability of the practical training course's manual in overall was at high level. When considered in each part, it was found that part 1: the suitability of practical training course and part 2: lesson plan were at high level. For the rest part, it was at a very high level.

Table 2 The suitability of part 1: Practical training course in total and in each component.

n=7

item	$\overline{x}$	S.D.	suitability level
1. title of the course	4.43	0.79	high
2. introduction	4.29	0.76	high
3. course objective	4.57	0.53	very high
4. training topics	4.29	0.76	high
5. course standard	4.57	0.53	very high
6. qualification of the trainees	4.29	0.76	high
7. the schedule of the course	4.29	0.49	high
8. quantity of the trainees per course	4.29	0.49	high
9. qualification for lecturers	4.43	0.53	high
10. facilities	4.43	0.53	high
11. passing conditions	4.29	0.49	high
12. course management	4.57	0.53	very high
total	4.39	0.58	high

The (Table 2) illustrated that the suitability of the practical training course in overall was at high level. When considered in each component, it was found that course objective, course standard and course management was at a very high level. For the rest component, it was at high level. Due to the practical training course has developed in accordance with the problems of lecturers in the educational subject in order to increase knowledge, teaching skills that are going in the same direction, consistency and coherence in each subject. Hinon (2015) said that there should be a meeting between the instructor and the students. The instructors provide a consistent understanding of teaching and learning activities for students are in the same direction.

Table 3 The suitability of the part 2: Lesson plan in total and in each topic.

n=7

item	$\overline{x}$	S.D.	suitability level
1. from course to plan of study	4.40	0.60	high
2. learning and behavioral level	4.23	0.73	high
3. instructional steps	4.40	0.74	high
4. from subject to teaching program	4.46	0.70	high
5. the composition of behavioral objective	4.40	0.74	high
6. guidelines for writing the behavioral objective	4.57	0.56	very high
7. analysis and generate an information sheet	4.49	0.70	high
8. teaching activity (motivation)	4.40	0.74	high
9. teaching activity (lecture)	4.43	0.74	high
10. teaching activity (questioning)	4.43	0.74	high
11. analysis to select teaching aids	4.37	0.69	high
12. work sheet/test sheet	4.43	0.70	high
13. activity sheet and evaluation sheet	4.46	0.74	high
14. design and create lesson plan	4.46	0.70	high
15. measurement and evaluation	4.49	0.70	high
16. application and progress	4.43	0.78	high
17. supervision of teaching	4.40	0.74	high
18. supervision of questioning practice	4.43	0.60	high
total	4.43	0.70	high

The (Table 3) illustrated that the suitability of the lesson plan in overall was at high level. When considered in each topic, it was found that a guideline for writing the behavioral objective was at a very high level. For the rest topic, it was at high level. Due to the content in each topic is developed by content analysis, digest content, sort content from easy to difficult, teaching from the unknown things to the known things, from the easiest practice to that most difficult practice. Boonsanong (2015) mentioned that the practical competence course for teaching coaches in the vocational institutes are developed by the content analysis, the digest

content, the sort content from easy to difficult. It is discovered that the appropriateness of the practical competence course is in the high level. In addition, The lesson plans were assigned to learn theory before practice practically all training topics. Wannasawade (2013) focused on learning theory before practicing all the topics of the training, to check the contributions and suggestions from trainers at every stage of practice.

Table 4 The suitability of the component of lesson plan in total and in each component.

n=7

item	$\overline{x}$	S.D.	suitability level
1. lesson plan	4.30	0.71	high
2. information sheet	4.63	0.52	very high
3. activity sheet	4.10	0.91	high
4. evaluation activity sheet	4.52	0.50	very high
5. teaching aids	4.61	0.63	very high
total	4.43	0.70	high

The (Table 4) illustrated that the suitability of the component of lesson plan in overall was at high level. When considered in each component, it was found that information sheet, evaluation activity sheet and teaching aids were at a very high level. For the rest component, it was at high level.

Table 5 The suitability of the appendix in total and in each part.

n=7

Item	$\overline{x}$	S.D.	suitability level
1. appendix A : the various form	4.43	0.53	high
2. appendix B : self-assessment form	4.71	0.49	very high
total	4.57	0.51	very high

The (Table 5) illustrated that the suitability of the appendix in overall was at a very high level. When considered in each part, it was found that the self-assessment form was at a very high level and the various forms was at high level.

Conclusion

The result found that the suitability of a practical training course to enhance lecturers' potentiality in the educational subject in the Bachelor of Science in Technical Education consists of 3 parts; 1) the training practical course, 2) the lesson plan and, 3) the appendix. The suitability of a practical training course's manual in overall was at high level.

Therefore, it can be concluded that the developed practical training course has acceptable quality and can be implemented to train the lecturers' potentiality in educational subject.

Recommendations

1. From the analysis of the components of training course has set the quantity of the trainees 20 people per course. This training course is to develop the practical course which be provided the content that both theory and practice. There for, it will have to determine the proportion of lecturers per trainees to fit in proportion to 1:7 or less.

2. There should be a study topic in the training which is divided into the topics in theory and the practice teaching. So the trainees gain knowledge and skills to effectively teach educational subjects.

3. This research shows the suitability of a practical training course from expert opinion. Therefore, a practical training course should lead to tryout to confirm the results.

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