Competency training of initial crew resource management course for cabin crew

N Paethrangsi

Department of Airline Business, International College; Suan Sunandha Rajabhat University, 1 U-Thong Nok rd., Dusit, 10300, Thailand

E-mail: nisara.pa@ssru.ac.th

Abstract. This research is a mixed method study with the following objectives. (1) To identify competencies training of initial crew resource management course. (2) To validate and rank order the CRM training competencies. (3) To examine significant differences between ranking results from two certain groups of respondents. Definition of training competency has been done through literature review and in depth interview of 20 CRM instructors, while order ranking of training competencies has been done through questionnaires of 9 levels of importance. Population are airline employees, 400 sample used can divided into two groups; group one consists of instructors, chief pursers and supervisors and group two is junior cabin crew. Results finding can be concluded as follows; training competencies consist of (1) knowledgeable and skillful instructor, (2) appropriate curriculum, (3) follow up and evaluation system (4) trainee qualification and self-efficacy, (5) knowledge of organization's policies, procedures, guidelines and (6) sufficiency training facilities and training material. Rank order views from both groups were not much different, they rated knowledgeable and skillful instructor is the most important while sufficiency training facilities and training material was perceived least important.

1. Introduction
Civil Aviation Authority of Thailand (CAAT) requires all air airlines to ensure that all cabin crew members are properly instructed in their duties and responsibilities. Cabin crew initial training required to cover the element topics of aviation indoctrination, aviation security, aeromedical aspects and first aid, emergency equipment and procedures, fire fighting and water survival, evacuation procedures and emergency situations, dangerous goods, cabin crew general and services duties and responsibilities, aircraft familiarization visits, familiarization flights (OJT) and human factors and crew resource management (CRM) [7]. CRM training for cabin crew plays a big role in enhancing communication among people in all situations. Cabin crew training department needs to demonstrate its influence and contributions to an airline because cabin crew members represent the performance of airlines. The cabin crew training cost is high so it is important to show the benefits gain from training. Although crew resource management course is a mandated course for cabin crew, the competency training is necessary [7]. The purposes of this study were (1) to identify competencies training of initial crew resource management course, (2) to validate and rank order the CRM training competencies, (3) and to examine significant differences between ranking results from two certain groups of respondents.
2. Theoretical and Analysis

Initial CRM training (Indoctrination/Awareness) focuses on the functioning of crewmembers as teams, not as a collection of skillfully competent individuals. It provides opportunities for crew members, in practicing the skills necessary to be effective team leaders and team members. Initial CRM training would be completed before release to be a cabin crewmember unless the crewmember has previously completed an Initial Airlines CRM Course. Initial CRM training addresses the nature of the operations of the company concerned, as well as the associated procedures and the culture of the company. This will include areas of operations, which produce particular difficulties or involve adverse climatic conditions and any unusual hazards. Topics in CRM course consists of (1) human error and reliability, error chain, error prevention and detection; (2) company safety culture, Standard operating procedures (SOPs), organizational factors; (3) stress management, fatigue and vigilance; (4) information monitoring, acquisition and processing, situation awareness, workload management; (5) Decision making; (6) communication and coordination among crewmembers; (7) leadership and team behaviour.

The airlines shall ensure that all Crew Resources Management instructors have minimum qualifications as follows; (1) own five years’ experience as a crew member or previous experience as a safety training instructor (2) have a thorough knowledge and pass theoretical and/or practical assessment of competence in the appropriate aircraft category to demonstrate the ability to instruct and train to the level required by the airlines. (3) have ability to fulfill the company cabin crew training policy and standards (4) have completely received training in accordance with the applicable requirements of crew resource management to efficiently cover the duties and responsibilities to be performed [7]. The critical role of instructors influences the success of CRM training program ultimately depends on the skills of the people who administer the training and measure its effects. CRM instructors must be skilled in all areas related to the practice and assessment of CRM. Gaining proficiency and confidence in CRM instruction, observation, and measurement requires special training for instructors. In many CRM training processes, instructors are required special training in order to calibrate and standardize their own skills [9].

Six articles of crew resource management training were assessed for different people i.e. cabin crew, flight crew, railroad crew, airline staff, and maintenance technical operators, they revealed similarly concepts that CRM training as the methodical and systematic acquirement of skills, attitudes and rules, which outcome helps improving performance in the work environment [3], [5], [6], [10], [13]. Malak stated that in an altering technological environment it is imperative to understand learning abilities along with the types of aptitudes required at diverse stages in the learning process [4].

3. Research Methodology

This research is a mixed method of quantitative and qualitative methods. The researcher developed the definition of training competencies (which was provided to respondents on the questionnaire) after a review of training literature and in-depth interviews with twenty CRM instructors. Quantitative study used questionnaires on population of 400 members of airlines employees in Thailand. I divided respondents into two groups, which they are group one is a-20 of CRM instructors, 40 chief pursers and 140 cabin crew supervisors who had experience in CRM course, and 200 junior cabin crews who have finished initial CRM training within a year. The respondents were asked to sort the six competencies into nine levels of important according to the perceived importance of each. The distribution of competencies in this research was based on an example from the work of William Stephenson [14].

| Scores | Most Important | Least important |
|--------|----------------|----------------|
| 8      | 7              | 6              |
| 5      | 4              | 3              |
| 2      | 1              | 0              |

The six competencies were ranked-ordered from "Most Important" (8) to "Least Important" (0), with seven degrees of importance between these extremes (7 through 1). To facilitate the ranking, each respondent was given a set of instructions that described the process of ranking. The ratings of the 400
respondents were consolidated and processed to determine the mean for each competency. Then check the significant difference competencies which were ranked between two groups. Important competencies are identified through in-depth interviews with twenty CRM instructors and from literature review. It was found that

1. Appropriate curriculum should consist of the course syllabus meets the CRM training requirements of EASA, FAA, CAAT and all major regulatory bodies worldwide, also meets the needs of the airline. Appropriate designed content for trainees and constantly updated and standardized curriculum [12], [9].

2. Knowledgeable and skillful instructor consists of having adequate knowledge of human performance and limitations, creating good training atmosphere [7], [12].

3. Sufficiency training facilities and training material should consist of adequate and sufficient curriculum [2].

4. Knowledgeable and skillful instructor consists of having adequate knowledge of human performance and limitations, creating good training atmosphere [7], [12].

5. Trainee qualification and self-efficacy, trainee’s participation in learning activities, having good attitude, self-esteem, values, and perception, which motivated behavior [1], [2].

6. Follow up and evaluation system including evaluation results and improve the evaluation results [2], [7].

6. Knowledge of organization's policies, procedures, guidelines consist of organizations understand and adapt to different training methods, having process in measuring and evaluating the success of training [8], [12].

4. Conclusion
This study revealed six training competencies of initial crew resource management course for cabin crew which they are; knowledgeable instructor, appropriate curriculum, follow up and evaluation, trainee qualification, knowledge of organization's policies and sufficiency of training material.

Although the degree of importance of each competency is vary, Group of instructor, pursers and supervisors rated the most important competency to knowledgeable and skillful instructor follow by appropriate curriculum, while group of junior cabin crew rated the trainee qualification was important in number 2 of ranking. The ranking order based on two respondents groups’ views can be conclude as follows; Two groups of respondents (instructor/ pursers/ supervisors and junior cabin crew) rated the most important competency to (1) knowledgeable and skillful instructor (weight is 0.334). Follow by (2) appropriate curriculum (weight is 0.221), (3) the follow up and evaluation system, (weight is 0.205), (4) trainee qualification, (weight is 0.178), (5) knowledge of organization's policies, procedures, guidelines, and the last one, (6) sufficiency training facilities and training material was rated less important (weight is 0.008).

This research studied training needs on cabin crew in Thailand regional basis; the results of this study suggested that the qualification of instructor is very important to initial Crew Resource Management training. Future research needs to be conducted to determine the other variables influencing to cabin crew training.

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