

CHAPTER 1

Introduction

1.1 Importance of Professional Development

There is certain inevitability that technology will progress and become increasing complex. The prospect for this is quite alarming. In this short time it has made a tremendous impact on lives. While discussing the changing society as civilian routine duties which are exactly professional, people should, however, ensure that they are still in a position where they are able to control technology. It is important that people must adapt their competence hastily to make sure that they can exist themselves under the way of various competitions and the current changing. They do not only know or remember but it is also necessary to be conscious of career achievement on completely technological world.

Professional development experiences are typically classified as education and training methods. It is believed that education programs can help learners to have a deep foundation of factual knowledge, understand facts and ideas in the context of a conceptual framework, and organize knowledge in ways that facilitate retrieval and application. Education programs typically lead to a graduate degree or other credit based certification. Training programs are specific to an area of inquiry and set of skills related to an area of inquiry. Completion of training participation can lead to continuing education units, clock hours, credentialing, and certification. Education and training programs can include face-to-face instruction in a group setting, self-study, web- or e-based learning, blended learning, observation by a coach or mentor with feedback to the learner, and other methodologies.

The necessity to develop man-power to be professional is important in both each man-power and organization. First, the man-powers are assisted to develop continuously. Second, the man-powers are suitably trained for changing and challenging of

technology by their own. Third, they are assisted to face up and find out the problems and solutions. Fourth, the man-power proficiency in working ability needs to be increased. Finally, their career achievements can be developed and thus support the organization.

In order to determine whether the learning is worth the improving the career life, professional development is necessary to individual benefits of higher education to become open-minded, more culture, more rational, more consistent and less authoritarian.

1.2 Goal Competency of RTAF Man-power

Being air-power professional, it is a device of executive staff to keep up with various changes and challenges of men-power to co-operate their strength and willing. Thus, the professional man-power is essential functioned and combined with the permanent mission development center which conducts the RTAF to be “One of the Best Air Forces in ASEAN” (Directorate of Operation, RTAF, 2011).

The quality of RTAF man-power must have competency over or above the goal range of RTAF. David C. McClelland (1970) defined competency as the characteristic hidden in a person which actually makes performance ability in his responsibility.

RTAF expects the following competency from the RTAF man-power:

1) Core competency: All man-power of RTAF needs to have and follow it as the main basic ability abbreviated RTAF which is comprised of

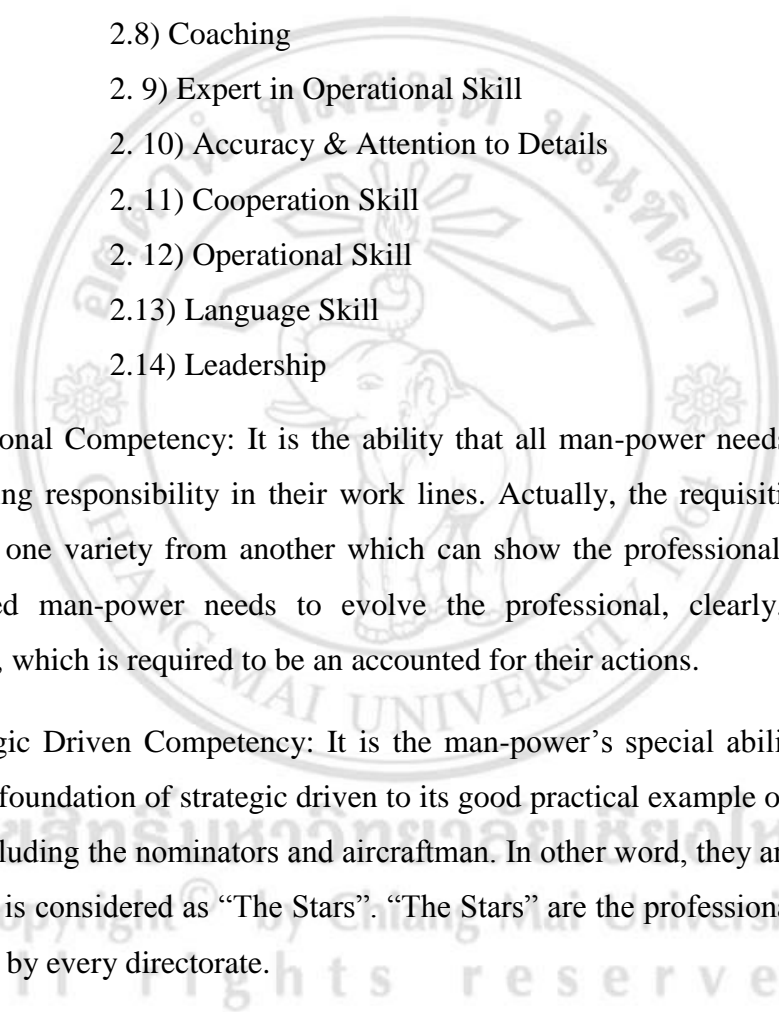
R: Readiness for Missions

T: Teamwork and Unity

A: Achievement of Goals

F: Forward Innovation

2) Managerial Competency: It is the strength of each rank of man-power needed to have which is different from his operation to impose condition as to Group Captain down to Officers. This Managerial Competency totally contains fourteen characters namely;

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- 2.1) Visioning
 - 2.2) Decision Making & Problem Solving
 - 2.3) Negotiation Skill
 - 2.4) Strategic Managerial Skill
 - 2.5) Strategic Planning
 - 2.6) Analytical & Follow-up Skill
 2. 7) Communication Skill
 - 2.8) Coaching
 2. 9) Expert in Operational Skill
 2. 10) Accuracy & Attention to Details
 2. 11) Cooperation Skill
 2. 12) Operational Skill
 - 2.13) Language Skill
 - 2.14) Leadership

3) Functional Competency: It is the ability that all man-power needs to carry out duties involving responsibility in their work lines. Actually, the requisition for duties differentiated one variety from another which can show the professional competency. Each qualified man-power needs to evolve the professional, clearly, under their responsibility, which is required to be an accounted for their actions.

4) Strategic Driven Competency: It is the man-power's special ability which can introduce the foundation of strategic driven to its good practical example of working co-operation, including the nominators and aircraftman. In other word, they are called "The Stars", which is considered as "The Stars". "The Stars" are the professional man-power and requested by every directorate.

It is assumed that one man-power needs to have 'Core Competency', 'Managerial Competency' and 'Functional Competency'. These capacities assist the man-power to work efficiently or to be "Smart People". For special man-power groups, not only three competencies are desired but they need to have competency in strategy driving so that they are able to work in every situation. This can be accomplished by applying working approaches which make the man-power useful and successful, i.e. becoming "World Class People" (Directorate of Personnel, RTAF, 2011).

All four competencies instantly happen with man-power, which is believed that they will bring a lot of benefits to reach the goal of RTAF. The question is how they will increase the potential of proficient working. The professional development of man-power is a key answer to that question.

1.3 Professional Military Education in RTAF

The Air Chief Marshal's aim policy stated in 2011 is to develop RTAF officials both in quantity and quality so as to build up power in every academic knowledge ability in thinking, contemplating and determining suit to their job situations by improving educational system in RTAF to be up to date and quality appropriately to educational standard. It is stated namely teacher development, the structure of basic education and the standard of the evaluation. These aim to increase the potentiality of man-power in order that they are able to serve their responsibilities efficiently. Moreover, the RTAF expects to be an excellent learning organization by sharing their learning in organization, participating with knowledgeable treatment as well as applying their knowledge in their career proficiency.

There are twenty-five academic learning institutions depending on disciplines in RTAF. Each of them is responsible for training students according to its specialization. They include the School of Logistic under the Directorate of RTAF Logistic, School of Transportation under the Directorate of RTAF Transportation, and School of Aeronautical Engineering under the Directorate of RTAF Aeronautical Engineering, to name a few. However, Directorate of Education and Training, RTAF (DET, RTAF) plays its role of supporting education and training (DET, RTAF, 2011).

The Directorate of Education and Training, RTAF (DET, RTAF, 2011) provides training for RTAF staff as assigned by the RTAF and chaplaincy. In addition to planning, directing, coordinating and supervising training assignments, the Directorate of Education and Training inspects the academic activities throughout the RTAF and chaplaincy. There are many institutions under Directorate of Education and Training RTAF ranging from primary to higher education.

According to Figure 1.1, there are fifteen departments dealing with both direct education and education support. The education support includes the Headquarters, General Service Division, Chaplaincy Division, Language Center, Personal Testing Center, Academic Resources Division, and Financial Section. The departments related to the direct education can be divided into two levels respectively, namely the primary and higher education levels. The primary level consists of, for instance, the Air Technical Training School, Non-Commissioned Officer School, and Officer of Training School. The higher level is comprised of four institutions as follows: The Squadron Officer School (SOS), Senior Air Officer College (SAOC), Air Command and Staff College (ACSC), and Air War College (AWC). Apart from those institutions, the RTAF education can be done in the Academic Instructor School which is jointly the institution of three armed forces. Its duty is to educate all of instructors proficiently in their teaching mission. It is important responsibility is to educate the staffs and to improve their competency for the future careers.

The four RTAF higher education institutions are responsible for educating the officers in various levels. SOS prepares the squadron officer candidates to be a squadron commander officer in tactical level. ACSC prepares the squadron leader to wing commander being the chief of staff in any RTAF organization at wing level or operational level (encounter). SAOC prepares the squadron leader to wing commander, which is the most specific type of learners to be the coordinating staff in operational level of RTAF. AWC prepares the candidate to have the ability of strategic leaders and to be directive staff in terms of force preparation and force employment. More details of the four higher institutions will be given in chapter 2.



Figure 1.1 DET, RTAF and its organization (DET, RTAF, 2011)

1.4 SAOC and Challenging Problems of Learning

Due to its crucial role in the RTAF development, SAOC roles and its accomplishments to the desired goal is of utmost importance. SAOC also significantly differs from the three higher education institutions because of the variety in student characteristics. Accordingly, the investigation of the SAOC problems related to student learning is a challenging problem.

Most of the students in SAOC are much more elderly than the young students. The elderly students cannot keep up with the lesson compared to the younger in the learning process. However, they have much more experiences to solve the problems better than the younger students. In terms of the younger students, they are able to learn more quickly and can solve problems from their ideas based on their theoretical knowledge but without work experiences. The elderly students can share their experiences better than the younger ones. Based on the fresher education backgrounds, the younger students are always chosen to be the group leaders. This belief reduces the chance of the elderly students to cultivate their leader characteristics and thus always conducted by the younger leaders. Some elderly also lack of learning in terms of problem solving. Thus, when they have their examinations, they show lower performance. The students who are the top three in most classes are better educated and young. The students who are in the middle average are found older than the groups of best students. The groups of oldest students often are the last three from the lowest performance.

After the education course has been completed, it is found that the elderly students with more work experience get higher number of promotion in their career paths than the younger ones. They also gain higher positions. From another view point, the elderly students are not good enough as administrators in terms of executive works.

Regarding the learning process and the SAOC alumni learning styles, which were given in the preliminary study that will be presented in chapter 3. The results can be classified into three groups of learning models, where group A and group B were tended to be the converger while group C was the accommodator. Group A was comprised of youngest students among three groups, and group B was younger than group C. Besides, the difference of age when compared with their education backgrounds, it is found that the

majority of group A was the highest education level. The middle education level was group B, while the lowest one was group C.

The individual difference moderates the way of individual responsible to various situations with different viewpoints of the organization practices. The individual difference is considered to play an elemental role that how people reacts the encounter situations.

The differences in individual students, which include the qualification gap in education, working age, and experiences create difficulties of having a learning process that supports their differences. It is also difficult to construct the learning process that suitably improves their learning achievement so as to keep up among another. Comparing the differences of the two groups, the advantage of the former group is that they can apply their knowledge experiences to the other group when they have an opportunity to share the ideas. Even though the latter group is much more theoretically knowledgeable, they have less experience to solve the problem solution when they face up real situations. When observing the learning activities of SAOC, it is revealed that there are various learning activities in adult learning. In spite of their less state-of-the-art knowledge, the elderly students still have a progressive career path in the future. As a result, the determination of the efficient learning processes for the students with difference backgrounds, especially for the students who have lots of experiences but less state-of-the-art knowledge, is critical and significantly beneficial to SAOC and RTAF, respectively, in terms of their missions and goals.

Regarding to the learning process and intellectual-based method, the knowledge management provides a useful framework for the purpose. Kolb (1984) purposed a learning style model based on the experiential learning theory, which has become a promising solution. The Kolb model transforms the learner experiences through experimentation and other theories related to the SAOC mission and thus makes SAOC reach the RTAF goals. The application of Kolb's learning style determines the relationship between instructional techniques and learning styles.

1.5 Research Objectives

To build up the learning process which is suitable to the different characteristics among students is a crucial issue for successful learning process. Accordingly, the objectives of this research are thus:

1.5.1 To study and analyze the current status of SAOC learning process.

1.5.2 To develop and propose a KM-based tool as an alternative learning framework that leads to the successful learning of students with individual difference.

1.6 Research Questions

Based on the above-mentioned problem and the research objectives, the research questions are as follows:

RQ1: What is the current status of SAOC learning process, and how can this problem be explained from the KM perspective?

RQ2: How can the suitable KM tool be developed to overcome the difficulties of individual difference in group based learning?

1.7 Research Methods and Tools

The research aims at building a new model that increases the efficiency of the learning process of SAOC students. The model is expected to enhance the quality of the profession development for the students. The instructional techniques of Kolb (1984) with the consideration of technical outcomes and old instructional techniques of RTAF are investigated. The learning results of the past three courses are reviewed using Kolb's learning style assessment. The samples of alumni results including top three, middle three, lowest three graded students will be analyzed to capture their respective learning styles. In addition, a coherent set of Kolb's learning styles is used to present learning differences and process by Negative reinforcement. Mainly, accommodators play a role as a leader of each group. Moreover, Kolb's instructional techniques included with adult learning are needed to effectively improve in the process of learning. In order to evaluate student outcomes, reflective learning with the focus on the concrete experience is applied. The KM tool in this research refers to the "negative

reinforcement for Group Based Learning (GBL) in individual difference framework”. In another words, this KM tool represents the proposed methodology to solve the individual difference in the existing group based learning which applies the learning in action, the negative reinforcement, the adult learning, the experience learning and the reflective learning. As a method of improving the learning process, the alumni together with their commanders and their co-workers will be interviewed in the time period of six months after the course. This framework is also ready for the new coming students in the next academic term in meanwhile. Best practitioners are employed to share their knowledge to the SAOC community. Consequently, a Community of Practice (COP) for continuous learning and improvement is created for the SAOC network. The social network is also investigated a device of sharing knowledge and experience of the COP. The network is expected to create the multiplier effects that support the SAOC missions and RTAF goals.

1.8 Expected Benefits

1.8.1 The research results are expected to be beneficial to higher education institutions of RTAF where the learners have different backgrounds, e.g. knowledge, experiences, skills, attitudes, etc.

1.8.2 A group learning-based model is obtained. The model includes learning tools that are suitable for different leaning styles and abilities of learners.

1.8.3 The knowledge, leadership, and professional competency of learners are enhanced.

1.8.4 Each individual difference is developed continuously through the multiplier effects. They can share their knowledge after the courses in their COP via different kinds of social network, e.g. face-book. Their ability of problem solving is also improved through such networks.

1.9 The Scope of Time

In this research, the experiment covers four courses of SAOC with the duration of twenty-three weeks for each course. After that, the follow up of the graduate is conducted after six months. However, this practically requires more than six months including the feedback collection, data analysis and report, where it is totally three years.

1.10 Organization of the Thesis

This thesis consists of five chapters. The first chapter explains the importance of professional development and the necessary to develop the man-power of Air personnel of RTAF, which is essential for professional military education in RTAF. Furthermore, the research objective, research question and the research method are also given. Finally, the scope of time and expected benefits are included in the chapter.

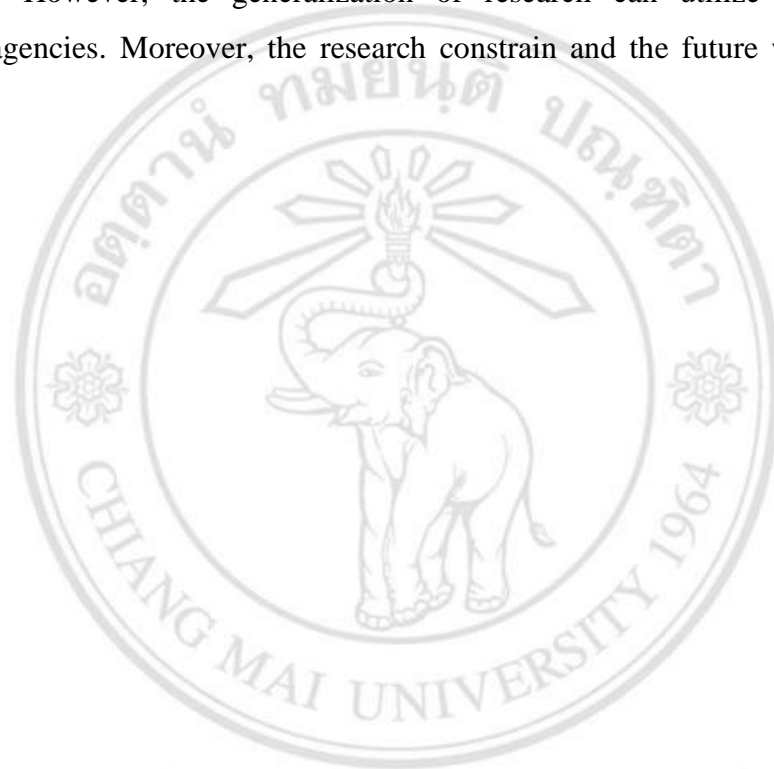
The related theories and literature reviews are given in chapter2, where they are the definition and the cycle of professional development, professional military education in US Air Force and RTAF, which was modified by RTAF. The experience learning theory by Kolb and learning in action by Garvin, especially leading learning, which one category of the learning in action theories that is used to explore in the framework. The individual difference is used to find the suitable tool and negative reinforcement is brought to solve the problem groups. The constructive learning is used to design the assignments. Finally, the reflective theory and social network utility are included for learning outcome evaluations and experience of knowledge sharing, respectively.

The third chapter describes the analysis of SAOC learning process and the proposed solution methodology, in which the new framework is explained to solve the main problem. It consists of five phases, population survey, experiment process, result analysis, model verifying and social network creation. The four steps of experiment process comprise of the assessment of SAOC learning style, group seminar arranging, learning process managing and score evaluation will be presented.

The fourth chapter presents the two case studies of SAOC courses in order to confirm the solutions of proposed framework. The first case investigates the main problem that can be used to improve the SAOC learning outcomes. The second case is introduced to

find the relationship between the instructors and student learning styles, where the more effective and high achievements can be obtained. Moreover, the second case is also used to verify the influence of the social network on the learning outcome achievements.

The last chapter is the conclusion of the thesis based on the proposed research methodology. It is included the research contributions and the dynamic organization improvement. However, the generalization of research can utilize in the other government agencies. Moreover, the research constrain and the future works will be given



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