

Model of Learning Management to Develop English Skills of Vocational Students in Thailand

Tangpak Takrudkaew ^{a*}, Kanit Kheovichai ^b

^{a,b} Doctor of Philosophy (Development Education), Faculty of Education, Silpakorn University

*Corresponding author: tangpak@hotmail.com

Abstract

This research is research and development aiming to: 1. study the current situation and the need for English language skills development of vocational students in Thailand; 2. construct and develop a model of learning management; 3. study the results of the model implementation; and 4. to study satisfaction of students towards the model. The results revealed as follows: 1. In terms of current situations and needs in the context of internal and external factors contributing to learning management for improving English language skills, it was found that, there are some surprising differences among the students, English instructors and entrepreneurs in many dimensions especially on the issues related to teaching and learning and related knowledge and activities of each required English language skills of graduates This finding reflected the inconsistency between teaching management and the actual needs of learners and the workplace. 2. The developed learning management model, called the PIER+4 Model, consists of 4 main steps: 1) Preparation (P), 2) Instruction (I) 3) Evaluation (E), and 4) Reflection (R); and 4 supports for learning management, comprising 1) competency of the educational administrators 2) competency of the instructors 3) Availability of the environment, and 4) Readiness of the entrepreneurs. The results of the model quality inspection found that overall, it was at a high level of appropriateness. 3. The results of the model implementation using authentic assessment revealed that the learning achievement of experimental students was significantly higher than 60 percent criterion at the 0.01 level of significance. As for the English language skills focus, the skills that students had the highest average score were speaking, followed by reading, writing, and listening respectively. 4. The satisfaction level of the students towards the PIER+4 Model was at the highest level.

Keywords: Instructional Model, English Skills, Vocational Education

1. Introduction

In the development of English language skills for vocational students, the teaching style leading to learning is dynamic. It changes following the changing context. The challenging 21st century education question for educators is that there is any process to make the education system in line with the changing times, especially in accordance with the changing context of learners or not. An extremely important role to play in guiding learners to learning in this 21st century is the educator who must be alert and prepared to manage learning in order to prepare students with the skills for living in the world of the 21st century. The most important thing is learning skills. It is absolutely necessary to change the learning management process as well as developing teaching and learning management styles to prepare in various fields for learners in the 21st century. This agrees with the recommendations of Siriphan Chumnum, one of the committees for studying, researching and developing the structure, work system and mechanism for driving the national qualifications framework into practice. The recommendations are to have the important principles related to teaching and learning management, to provide teaching and learning in accordance with professional standards, and to support the promotion of teacher development, media, tools, teaching and learning to prepare educational institutes and enterprises in learning

management. Teaching must meet the needs of the manufacturing and service sectors to increase the capacity and competence of educational institutes in administering and managing education to meet the needs of the manufacturing and service sectors. This includes the development of the potential of administrators, faculty members, teachers and educational personnel and supervisors of practice in the workplace to have knowledge, understanding and be able to manage teaching and learning in a variety of formats. The focus is on professional competence, analytical thinking and problem solving skills (National Qualifications Framework, revised edition, 2017: 5-6). This is consistent with the concept of “Competency capability” of Thissana Khaemmanee (2019) stating that in educational reforms, teaching and learning that emphasizes students to apply the knowledge and skills they have learned to be useful in daily life should be provided. Therefore, in the development of learning management to improve English skills for vocational students, it has to focus on English language skills in terms of professional competence. The approaches for teaching and learning must be designed to enable learners to develop Knowledge (K), Skills (S), and Attitude (A) in being able to apply these three elements in the careers to create results of excellent work in that job.

However, according to the results of the Vocational National Education Test (V-NET) to measure the knowledge and thinking of students of the 3rd year Vocational Certificate (3rd year Vocational Certificate) and the 2nd year High Vocational Certificate (2nd year High Vocational Certificate), it was found that the national average score for English subjects in the 2015 academic year of Vocational Certificate was 40.31 percent while those of High Vocational Certificate was 39.56 percent (National Institute of Educational Testing Service, 2015) which was very low scores. In addition, the report identifies problems facing current vocational graduates in the English language context which is inconsistent with labor productivity and labor market demand for quality of vocational graduates (Connecting the Mekhong through Education and Training: COMET; cited in Chongjit Rittirong and Rina Tadee, 2015). Meanwhile, the Office of the Education Council (ONEC) has developed an educational assessment program called PISA (Programmed for International Student Assessment) and The English Proficiency Index (EFI) reported the same findings that the English language proficiency in Thailand is categorized at very low level. This is mainly caused by various factors such as the quality of teachers which may come from non-standardized teaching. The instructors are not proficient in the subject matter being taught. They have no career motivation, no teaching psychology, and excessively heavy teaching workload. The quality of the classes is not conducive to teaching (Dhanasobhon, 2006; ONEC, 2003). Classes have too many learners. Learners have greatly variedness of proficiency in English language skills. They lack the opportunities to practice English outside classes. They lack motivation and lack responsibility for their own learning (Biyaem, 1997, cited in Wiriyachitra, 2002). In addition, for the management of teaching English in the past, the focus was on academic education rather than knowledge that emphasized methods, skills and practical experiences. Especially the learning process, most teachers focus on teaching rather than learning of the learners. The descriptive or explanatory teaching methods are mainly used. Students tend to learn by memorizing (Rote Learning) resulting in a lack of creativity. All of these factors lead to a significant disadvantage for Thai workers including those from vocational students to be considered for employment compared to workers in neighboring countries with better language skills.

To find a solution to the problem mentioned above, the government has developed a driving plan of the National Qualifications Framework for continuous practice. The Vocational Qualifications Standard Criteria for Higher Vocational Education Year 2019 has been set for the Office of Vocational Education Commission, vocational institutes, and educational institutes to be used as guidelines for the development or improvement of curricula, teaching management, and development of educational management quality in order to be able to produce quality graduates. Moreover, the vocational courses in the learning outcomes category in terms of knowledge according to the High Vocational Certificate indicated that vocational graduates must have knowledge of English and technology, information and communication at the level linked to work through teaching and learning in accordance with Communicative Language Teaching (CLT). It is the language teaching process that focuses on the importance of the learners allowing learners to use English for communication in everyday life. The English language course content is divided into two categories; 1) English for General Purposes (EGP) and 2) English for Specific Purposes (ESP).

From the background and significance including the aforementioned problems, it is imperative to have an appropriate learning management model for learners. As the researchers are the students in the Department of Development Education and are English teachers, there is some interest in preparing for vocational students across the country to develop the communication skills necessary in the profession by focusing on studying the English language learning management model to improve the English language skills of vocational students in the country. This can be used as the information for teaching and learning in vocational education efficiently and effectively to help promoting learning and understanding of learners to their full potential leading to competitive potential to be accepted both nationally and internationally.

2. Research Methodology

This is the Mixed Method Research using both Quantitative Research and Qualitative Research with the following research methodology:

1. Quantitative Research: The research tool is the Checklist rating scale questionnaire in a 5-level standard assessment. It is the Likert scale (adapted from the questionnaire to study English language data created by Bussaba Kanoksilpatham, 2016). There were 4 questionnaires for 4 groups of respondents, namely, 1) sample group of the 2nd year High Vocational Certificate students registered for the second semester of the academic year of 2020, in the category of industrial subjects, totaling 331 people, 2) group of instructors for English courses for Vocational Certificate students, totaling 6 people, 3) group of educational administrators including Director of the school, Deputy Director of the school, Assistant Director of Academic Schools or Head of Teaching Curriculum Development under the Office of Vocational Education Commission with teaching in industrial subjects, totaling 6 people; and 4) group of entrepreneurs who employ graduates of the 2nd year High Vocational Certificate, totaling 6 people. The questionnaire consisted of 4 parts. Part 1 was the personal information of the respondents. Part 2 was information on basic English usage and 4 skills of the respondents. Part 3 was information on the management of teaching English to vocational students in the 2nd year High Vocational Certificate registering the industrial subjects.

2. Qualitative Research: The data was collected from the in-depth interview. The research tool was the semi-structured questionnaire with open-ended questions to ask for opinions and other suggestions related to the development of English language skills. In the viewpoint of the respondents, the questionnaires were divided into 3 issues to inquire about the satisfaction of the respondents towards the overall picture of the students' English skills. Factors of success or failure, problems, obstacles and solutions were studied to be used in the approaches for improvement to develop teaching and learning management in English courses further. The key informants consisted of a group of 54 people from a purposive selection which were selected from four groups of quantitative respondents; 1) 6 educational administrator, 2) 6 English language course instructors for the 2nd year High Vocational Certificate students in the category of industrial subjects, 3) students of the 2nd year High Vocational Certificate in the category of industrial subjects from all 6 Central Vocational Institutes, 6 students each, using snowball technique for totaling 36 students selected from the same group as the quantitative questionnaire group, and 4) 6 entrepreneurs involved in the employment of the graduates with High Vocational Certificates in industrial subjects. After the questionnaires had been distributed, all of 54 questionnaires were collected and returned to verify the correctness and completeness.

Step 1: Research: To study the current situation and the need to improve the English language skills of vocational students in Thailand. The Quantitative Research Method was used. The sample group consists of vocational students in the 2nd year High Vocational Certificate who enrolls in the second semester of the academic year 2020 in the category of industrial subjects. The sample size was determined using the Krejcie and Morgan formula (1970) at a 95% confidence level and an allowable error of 5% of the total population from an educational institution affiliated with the Central Vocational Education Institute 4 totaling 2,270 people using the purposive sampling method. A total of 331 samples were obtained. The questionnaires were Tried Out with 30 similar groups of samples by testing with Nakhon Sawan Vocational College, Muang district, Nakhon Sawan Province to determine the quality of the tools determining the reliability of Cronbach's Alpha. The questionnaire's reliability was obtained for 1.00. Subsequently, the researcher-created tool was used to collect the data with the given sample. The quantitative and qualitative study data were analyzed with descriptive statistics to find the percentage, mean, and standard deviation. The prioritization of needs was in the order of the respondents' opinions on English proficiency skills using the 5-level opinion Likert Scale and SWOT content analysis to analyze the external and internal environment of organizations and individuals involved in the development of English language skills of vocational students.

Step 2: Design and Development: To create the learning management model to improve English language skills of vocational students in Thailand. The results of the data analysis were used to complete the drafting of a learning management model for improving English language skills of vocational students in Thailand. The researchers conducted a group discussion and brought the created form to 5 experts to review and improve according to suggestions. A model quality assessment questionnaire was also distributed (Nilsook and Wannapiroon, 2012) using the model for the quality assessment method of the Content Validity verification method as well as considering the Objectivity in the clarity of the question and the answer whether they are understood or not. The Content Validity was conducted using the Index of Item Objective Congruence (IOC) as well as the questionnaires. According to the results of the IOC examination, the IOC was 1.0. Finally, the opinions of experts were synthesized and the model was adjusted accordingly. The model was created for the learning management to improve English skills of vocational students in Thailand named PIER+4 Model.

Step 3: Model Trial: To experiment the learning management model in improving the English language of vocational students in Thailand. The sample group in this research was obtained from the purposive sampling with the following qualifications; 1) being the 2nd year High Vocational Certificate in the industrial subjects with English proficiency skills in the manner of proficiency, moderate, weak, mixed in order to obtain learners with English proficiency as close to the actual situation as possible. 2) As there is an English language course that meets the content to be researched, the researchers selected students from Nakhon Pathom Technical College, Muang District, Nakhon Pathom Province, under the Central Institute of Vocational Education. The sample group of students studying in the second semester of Academic Year 2020 consisted of 1 room with a total of 21 students, classified into 1 female student and 20 male students. The research was conducted in the Pre Experimental Designs format by experimenting with an experimental group (One- Shot Case Study). The experiment was conducted according to the One-Group Pretest-Posttest Design (Fitz-Gibbon, 1987: 113). The research tools were 1) 8 PIER+4 learning management plans to improve English skills of vocational students, 2) the test to measure listening, speaking, reading and writing skills, and 3) the achievement test. The results of quality analysis on the reliability test by determining the Index of Item Objective Congruence (IOC) (Luan Saiyot and Angkana Saiyot, 2000: 185) found that the values were between 0.63-1.00. According to Cronbach's method (KR-20), it was found that the value was 0.81. The difficulty value was found to be between 0.41-0.59 and the Discrimination Index was found to be between 0.45-0.59.

Assessment: To study the satisfaction of students towards the English language learning management model for improving the English language skills of vocational students in Thailand. The tool for assessing student satisfaction who received teaching management with the PIER+4 Model, developed as a 5-level assessment standard, which is a Likert scale (Boonchom Srisa-at, 2002: 103) 21 sets. The satisfaction was assessed in 5 aspects: 1) course content, 2) teachers, 3) teaching methods and learning activities, 4) measuring and evaluating learning outcomes, and 5) environment conducive to learning. The tools were distributed to a group of 21 students for assessment. Then, the results obtained from the data analysis were determined the frequency, percentage, mean, standard deviation test statistics, dependent sample t-test, and descriptive analysis and interpretation.

3. Research Findings

1. Results of study on current conditions and the need for English language skills development of vocational students in Thailand

1. Quantitative research results: Based on the results of study, the current situation and the need for English language requirements can be classified into issues or topics. The researchers present the results of the overall data analysis for all 3 survey respondents which are those who are directly involved in the content setting and teaching activities, namely 1) students (N = 331 persons), 2) Instructors (N = 6), and 3) Entrepreneurs (N = 6) as detailed below.

1.1. In terms of experiences that require the use of English to communicate in foreign countries, it was found that among the 331 students, only 5 students (1.51 percent) had experience using English in foreign countries. Countries that students have visited include Australia (30 days, family business), Singapore (7 days, travel), Portugal (7 days, travel), China (2 days, family business) and Malaysia (5 days, family business). Meanwhile, the groups of English instructors and entrepreneurs all have had the experience of using English to communicate in foreign countries. Therefore, it can be assumed that the opportunities for students to practice their English language skills are limited.

1.2 In terms of self-assessment on the ability to use English skills, it was found that the group of students self-assessed their ability to use English skills in all skills to be in the middle level ($\bar{x} = 2.69$). Meanwhile, the English instructors to vocational students at the vocational level in the category of industrial subjects self-assessed their competence in all English skills at a good level ($\bar{x} = 3.92$). The entrepreneurs self-assessed their proficiency in all English language skills at a moderate level ($\bar{x} = 3.92$).

1.3 English teaching and learning management

Approaches for teaching English courses: Students want to focus on teaching English courses in accordance with the Teaching English for Specific Purposes (ESP) rather than the English for General Purposes (EGP) teaching at a high level ($\bar{x} = 3.61$), which is in the same direction of the opinions of entrepreneurs who want to have ESP teaching at the highest level ($\bar{x} = 3.67$). Meanwhile, English instructors for vocational students at the vocational level in industrial subjects have the opinion that EGP teaching approach should be emphasized at the highest level ($\bar{x} = 5.00$).

Self-learning feature: Both the students and the instructors were of the opinion that the self-taught character of self-discipline and responsibility for assignments is essential for learners to improve their English language skills. It was viewed by students as the highest essential attribute at a high level ($\bar{x} = 3.86$), while it was viewed by the teachers as a requirement at the highest level ($\bar{x} = 4.83$). The instructors view that every item assessed under this section is essential that every English language course learner should have at the highest level. Meanwhile, the students thought that there should be a moderate or very high level, especially the assessment of the practice of thinking, imagination, and creative problem solving to dare to present clearly and rationally. The students perceived to be necessary to improve their English skills at a moderate level and ranked lowest on the assessment list. Whereas, teachers view this feature as a necessity that students should have at the highest level and is ranked the lowest of 2 on the appraisal list.

Teaching style: Both the students and the instructors have different opinions. The students viewed that the teaching style in the manner of transferring, teaching and learning is step by step, suitable and easy to understand. It is required at the highest level ($\bar{x} = 3.80$). A teaching style that incorporates morals, ethics, professional ethics and good values such as honesty, patience, sufficiency and publicity is necessary in the highest rank and at the greatest level ($\bar{x} = 5.00$).

Learning aptitude: The students were of the opinion that Learning aptitude by looking through teaching activities is viewed in a way to visualize information including visual, symbols, diagrams, plans, graphs and charts. It was the activity needed to improve English skills at the highest level ($\bar{x} = 3.68$). Learners have an aptitude for learning through teaching and learning activities by doing the activities as individual, pair or group activities in situations related to reality, in the Role-play, including practice to find their own aptitudes and learning methods. It is the highest necessity at the greatest level ($\bar{x} = 4.83$).

Characteristics of learning channels: The students were of the opinion that Learning channels that come from classroom activities are of the utmost importance to the development of English language skills at the very necessary level ($\bar{x} = 3.71$). Meanwhile, the teacher viewed that Group activities are essential to improving your English language skills at the greatest level ($\bar{x} = 4.67$).

1.4 Relevant knowledge and activities of each required English language skills of graduates of the High Vocational Certificate for careers

Related knowledge: For the question how High Vocational Graduates in industrial subjects are necessary to develop knowledge related to English directly and indirectly in each area in which extent, it is worth noting that both students and teachers have the same opinion that the body of knowledge of reading, writing and pronunciation needs to be developed at a high level except for grammar at an intermediate level. The students consider listening and vocabulary cognition required a high level of development at a high level ($\bar{x} = 3.79$), followed by speaking ($\bar{x} = 3.76$), reading ($\bar{x} = 3.73$) and writing. ($\bar{x} = 3.66$) respectively. Every body of knowledge needs to be developed at the highest level, with teachers focusing on vocabulary ($\bar{x} = 4.67$), speaking skills ($\bar{x} = 4.67$), listening skills ($\bar{x} = 4.33$). It is an aspect that needs to be developed at the highest level. Every body of knowledge needed to be developed at a moderate level. It is the area that needs to be developed at the greatest level ($\bar{x} = 3.33$).

Activities for each English skill: For the question on the opinions of the respondents in the 3 groups that graduates with High Vocational Certificate in industrial subjects to what level is the proficiency of English in industrial occupations required for each skill level:

1) In listening: The students gave importance to all activities of listening at a high level by giving importance to listening skills in listening activities to perform tasks and listening to problems related to technical work in the same rank at the highest level ($\bar{x} = 3.76$). This is consistent with the opinions of English language teachers that both activities are necessary at the highest level and ranked highest in the 6 Listening Skills Activity Assessment list. This should be at the moderate level giving priority to problem listening activities related to technical work and listening to presentations and discussion at the seminar at the moderate level.

2) In speaking: The students attach importance to all speaking activities necessary for the graduates of High Vocational Certificate for professional careers in requesting and offering assistance to solve technical problems at the high level. On the contrary, the entrepreneurs see this speaking activity essential to career at a moderate level and at the lowest in the assessment of the 7 activities. The most important professional speaking skills activities are expressing opinions and giving advice on solving technical problems with the highest level of necessity.

3) In reading: It was found that the respondents in the 3 groups thought that the activities of reading specifications or user manuals of products were necessary for the careers of the graduates of the High Vocational Certificate ranked highest in the four assessment lists. The students placed high level of emphasis on all essential reading activities. This is in line with the entrepreneurs who saw that this activity is necessary to a

large extent. However, other reading skill activities were assessed at a moderate level. Meanwhile, the English language course teachers think that all reading skills activities were assessed as essential to the careers of the High Vocational Certificate graduates at the highest level of necessity in all assessed items.

4) In writing, it was found that the respondents in all 3 groups had the same opinion. All groups viewed that activities on writing letters, e-mail and social media skills are essential at a high level. It contributes to the careers of graduates with higher vocational certificates and is the highest essential writing skill activity among students and entrepreneurs. The group of English language course teachers thought that the activities of writing noticeboards for communication in the organization is necessary at the greatest level towards the careers of graduates of High Vocational Certificate.

2. Qualitative research results: Based on the results of the study on current conditions and needs related to internal and external factors of educational institutes under the Department of Vocational Education for Central Region 4 in all 6 institutes using SWOT analysis according to the characteristics of internal and external factors, it can lead to the development of a learning management model to improve English language skills of vocational students in Thailand. The researchers analyzed strengths, weaknesses, opportunities and obstacles in 6 main aspects of learning management, namely, 1) instructional management, 2) learner competency, 3) instructor competency, 4) educational administrator competency, 5) availability of the environment, and 6) availability of the establishment.

2.1 Results of the creation and development of an English language learning management model to improve English language skills of vocational students in Thailand

Results of creating and examining the quality of the learning management model: The result of creating learning management model is the learning management model for improving English language skills of vocational students in Thailand named PIER+4 Model consisting of 4 main steps and 4 learning management support.

The main four steps are: 1. P-Preparation, 2. I-Instructional, 3. E-Evaluation, and 4. R-Reflection. Each step consists of sub-steps including 1. Preparation for teaching. It consists of three sub-steps; 1.1 analysis on the needs, 1.2 preparation for learners, and 1.3 design on competency-based instructional management. It consists of five sub-steps; 2.1 searching, 2.2 introduction to lesson, 2.3 practice, 2.4 creativity, 2.5 lesson summary. 3. Learning Measure and Evaluation is the step to check the learning achievement of the learners by considering the content of 3 areas; 3.1 professional skills and competencies according to professional standards in terms of knowledge and practical skills that meet the needs of the labor market; 3.2 basic knowledge and skills in life which is knowledge and practical skills that can be applied in daily life, and 3.3 morals, ethics, professional ethics, attitudes and habits that are suitable for work in terms of individual performance behaviors and group activity participation behaviors. This is the process in reporting results and providing feedback. There are 3 sub-steps; 4.1 learning objectives, 4.2 learner behaviors before learning, and 4.3 instructional management process. There are 4 aspects of learning management support, namely; 1. competence of educational administrators. It consists of: 1.1 Determining clear policies to support teaching and learning management, 1.2 Integrative English that can be implemented in practice and establishment promoting the potential of English language course instructors; and 1.3 providing an environment conducive to future job-related language skills learning. 2. Teacher competency consists of 2.1 potential in knowledge, contents, and responsibilities, 2.2 technical expertise in teaching and learning management, 2.3 planning together with the establishment that is learning center for practicing language skills in actual conditions, 2.4 pedagogical psychology. 3. Availability of the environment consists of 3.1 classrooms, 3.2 language laboratories, 3.3 audiovisual equipment, 3.4) online teaching materials (e-learning), 3.5 sources for self-discovery outside the classroom. 4. Availability of the workplace consists of 4.1 participating in curriculum design and implementation, teaching and learning together with educational institutes to prepare learners for both content and English language skills related to actual work and 4.2 participating in resource management in teaching and learning which covers both human resource matters learning resources and an environment to enhance opportunities for learners to use their knowledge and language skills according to actual conditions.

Results of an experimental use of an English language learning management model to improve English language skills of vocational students in Thailand: After the PIER+4 Model has been applied in the management of learning with the 2nd year vocational students of industrial subjects in the second semester of the academic year 2020, the study results were in accordance with the research objectives. The student's post-study achievement through the PIER+4 model of learning management model got 69.43% score with SD = 8.274 which is significantly higher than the 60 percent threshold set at .01 level.

Results of study on the satisfaction of students with the PIER+4 learning management model

Model of Learning Management to Develop English Skills of Vocational Students in Thailand

Overall, the students' satisfaction with learning management according to the PIER+4 learning management model was at the highest level ($\bar{x} = 4.184$, $SD = .769$). The aspect with the most satisfaction is the measurement and evaluation of learning outcomes ($\bar{x} = 4.35$, $SD = .765$), followed by teaching methods and learning activities ($\bar{x} = 4.31$, $SD = .810$). The third was the contents in all subjects ($\bar{x} = 4.30$, $SD = .732$) and the fourth was the instructors ($\bar{x} = 4.29$, $SD = .762$). All 4 aspects had the highest level of satisfaction and the environment conducive to learning had the lowest mean with the moderate satisfaction level ($\bar{x} = 3.37$, $S.D. = .740$). When considering each item in each aspect, the results were as follows.

Course contents: The evaluation item with the highest average is that it is useful in daily life ($\bar{x} = 4.43$, $S.D. = .676$) at the highest level of satisfaction. The assessment item with the least mean is the suitability and sufficiency for occupation ($= 4.19$, $S.D. = .928$) at a high level.

Instructors: The assessment items with the highest mean were teaching preparation in advance ($\bar{x} = 4.67$, $S.D. = .730$) which was at the highest level of satisfaction. The assessment item with the least mean was the ability to transfer knowledge to facilitate learning in the course content in order ($\bar{x} = 4.14$, $S.D. = .793$) at a high level, respectively.

Teaching methods and learning activities: The evaluation item with the highest average is organizing teaching and learning activities that promote learners' knowledge and skills to put them into practice ($\bar{x} = 4.43$, $S.D. = .676$) at the highest level of satisfaction. The lowest mean of the assessment items was choosing a variety of teaching methods that were suitable for the content of the studied subjects ($\bar{x} = 4.14$, $S.D. = .854$) at a high level.

Measuring and evaluating learning outcomes: The evaluation item with the highest mean was the evaluation on the teaching and learning outcomes that were consistent with the provided learning activities and based on learner development ($\bar{x} = 4.38$, $SD = .805$) at the highest satisfaction level. This was followed by 3 assessments with the same mean at $\bar{x} = 4.33$ at the highest satisfaction level which are to inform learners of clear evaluation criteria ($SD = .730$), to choose a variety of appropriate measurement and evaluation techniques or methods ($SD = .730$), and to provide feedback leading to the understanding and development of learners ($SD = .796$).

Environment conducive to learning: The evaluation item with the highest average was the classroom size which was sufficient for the number of learners ($\bar{x} = 4.29$, $S.D. = .717$) at the highest level of satisfaction. The assessment item with the lowest mean was language labs which have tools and equipment to practice enough for the number of learners ($\bar{x} = 2.48$, $S.D. = .873$) at the low level.

4. Conclusion And Discussion

For the current situation and the need to improve the English language skills of vocational students in Thailand: In creating and developing this learning management model, the researchers studied the current situation and the need for improving English language skills of the 2nd year High Vocational Certificate students of industrial subjects including those involved in teaching and learning management from 6 educational institutes under Institute of Vocational Education for Central Region 4, the realization that assesses the need for teaching and learning is essential. It will provide information for use in the design of teaching and learning. As Smith & Ragan (1999, p.32) stated, the need assessment is an activity to explore problems of past teaching and learning, student's needs, and the context of learning. In addition, Dick & Carey (2001, p.4) said that the need assessment is the systematic process. What is needed to be analyzed involves the problems and needs of the learners what the learning goal or desired learning outcome is and what the condition and context of teaching and learning is. The instructional designers must consider the information they need and how extensive they should be. They should know where the data source comes from. If it can be clearly defined, it can help operating efficiently. Therefore, as the need assessment is necessary, it is an activity that is carried out before the design of instructional management. **When comparing the opinions of the 3 groups of respondents on the 4 skills of English,** it was found that the respondents gave their opinions on the views that may be the same or different in every skill activity and the 4 main skills. In some skill activities, the respondents assessed skill activities as the top priority of the number of skill activities to be assessed. However, they assessed the level of need at different levels. Besides, in some skill activities, the respondents assessed the need for activities in that skill differently. This also happened in the assessment of all four English skills which may be because the respondents provided information from their opinions in their context based on their beliefs, work experiences, language proficiency needed for achieving the goals, etc. This is consistent with Maslow's Hierarchy of Needs theory stating that the hierarchy in demand theory is not necessarily fixed. It can be flexible according to environmental conditions, external factors and individual differences.

Current situations and needs related to the internal and external factors of the educational institutes under the Department of Vocational Education of Central Region 4 in all 6 institutes: From the results of studying the current condition of the main people involved in the management of teaching English courses, they are aware of the necessity related to internal and external factors of educational institutes under the Department of Vocational Education of Central Region 4 in all 6 institutes. The researchers had taken the strengths, weaknesses, opportunities and obstacles to analyze SWOT resulting in 6 factors that are the main factors in learning management; 1) teaching and learning management, 2) competency of the learners, 3) competency of the instructors, 4) competency of the educational administrators, 5) preparation of the environment, and 6) preparation of the establishment. Each of these factors is consistent with the opinions of educators or findings from research on factors affecting learning management. **In teaching and learning management and learner competency**, it is correspondent with the Secretariat of the Education Council (2020). **In teacher competency**, it agrees with the research of Jitima Wannasri (2009). **In teaching and learning management, instructor competence, administrator competence, and readiness of the establishment**, this is consistent with the research of Kantapat Montha (2018). **In the readiness of the environment**, it is correspondent with the establishment of educational management guidelines of educational institutes in organizing the learning process in Chapter 4, Section 24(5) to “encourage and support teachers to be able to organize the atmosphere, environment, learning media and facilitates so that learners can learn and have knowledge” (Ministry of Education, 1999). This includes Wiriya Ruechaipanich and Kamolrat Chimpali (2016).

In terms of academic achievement after using the PIER+4 learning management model, the students' post-study achievement PIER+4 was higher than the specified criteria by 60%. The statistical significance at the .01 level included the student's academic achievement after studying with the PIER+4 learning management model classified by English language skills. It was statistically significantly higher than before in all skills at the .01 level because the PIER+4 model was created from the study of concepts and theory related to teaching system model, learning management, teaching and improving English skills management of teaching and learning English related to vocational education and related research synthesizing the key elements in forming. The researcher studied the works of Joyce, Weil and Calhoun (2009: 21-37), ADDIE (2000), Reiser & Dick (1996), Kurt (2015), Dick & Cary (1990), Kemp (1990), Seels & Glasgow (1990), Brown and others (1995), Gerlach and Ely (1971: 13), Pimpan (2007: 19), Aporn Chaithieng (2003), Boonchom Srisa-at (1998), and Thitsana Khaemmanee (1999).

The important elements to guide the design of learning management model of this research are 1) setting goals and objectives, 2) analyzing the needs, 3) determining contents, 4) developing teaching and learning activities, 5) providing media and selecting learning resources, 6) implementing teaching and learning, 7) developing the tests, 8) measuring and evaluating the results, and 9) giving feedbacks. These elements are important and are always found in teaching and learning management according to the systemic theory approach which is teaching and learning process consisting of 3 main parts, i.e. knowledge, content, activities. The teachers prepare the learners to learn. 2. Process or action aimed for the learners to learn from the inputs presented by the instructors through the process of memorizing, practicing, analyzing until learners can create new body of knowledge by themselves. 3. For output or learning outcomes, the learners can apply knowledge to the real situations. When considering the learning management PIER+4 model, it can be seen that the 9 main components are integrated in a consistent and mutually supportive manner at each step of the model. **In terms of support for learning management**, during the experimental model, the instructors are constantly learning, improving and developing teaching-learning techniques. There is an education to understand the context of the students in personal history, English learning experiences, and past academic achievement. The arising questions were asked to English language course instructors and education administrators. The entrepreneurs and instructors in industrial engineering courses are contacted for advice on technical English information for professional careers. In terms of the environment necessary for learning management, the college has allocated equipment audiovisual projector to be installed in the classroom. This makes teaching and learning management more effective and interesting. As a result, students become more interesting and eager to learn.

Satisfaction of students towards the English language learning management model for improving the English language skills of vocational students in Thailand: The students gave reasons for their satisfaction in the following areas. Teachers understand the students' English proficiency. There is a basic language adjustment or reviewing previous knowledge before starting a new subject to help students understand more. It makes students not feel left out or unwanted by their friends while doing group activities. The students feel more hopeful and encouraged to be able to speak, listen, read and write in English. The activities are organized to promote analytical thinking, planning, problem solving. The responsibilities are for the assigned tasks or creativity to encourage the instructors and encourage the students to express themselves. This gives confidence in disseminating knowledge on the subject studied to classmates and is the reason for the satisfaction of the learners. This is consistent with the research of Pranee Onsri (2009).

References

- [1] Chongjit Rittirong and Rina Tadee (2015). Challenges in producing Thai skilled workers to enter the labor market of the ASEAN Economic Community, 11th National Academic Conference of "Population and Society", Demographic and Social Diversity in Thailand 2015. Institute for Population and Social Research Mahidol University.
- [2] Thitsana Khaemmanee. (1999) Learning and teaching management based on student-centered learning. Bangkok: Odeon Store.
- [3] _____. (2019). Pedagogical Sciences: Knowledge for effective learning process management (18th edition). Bangkok: Chulalongkorn University.
- [4] Boonchom Srisa-at. (1998). Teaching Development. Bangkok: Suwiriyasas.
- [5] _____. (2002). Preliminary research. 7th printing: Bangkok: Suwiriyasas.
- [6] Pranee Onsri.(2009). Development of instructional models that promote brain-based learning of nursing students, Royal Thai Army Nursing College, Ph.D. Research and Curriculum Development Srinakharinwirot University.
- [7] Phimphan Dechakup and Payao Yindeesuk (2007) 5C skills for learning unit development and integrated teaching and learning management. Bangkok: Chulalongkorn University Press.
- [8] Luan Saiyot and Angkana Saiyot (2000). Educational Research Techniques. 3rd edition. Bangkok: Suwiriyasas.
- [9] Aporn Chaithieng (2003). Teaching Principles (Revised Edition). Bangkok. Odeon Store.
- [10] Addie Model (2000). Addie Model. Retrieved February 3, 2020, from <http://en.wikipedia.org/wiki/ADDIE%20Model>
- [11] Brown, J. D. (1995). The Elements of Language Curriculum: A Systematic Approach to Program Development. Boston, MA Heinle & Heinle.
- [12] Dhanasobhon, S. (2006). English language teaching dilemma in Thailand. Retrieved May 17, 2017, from <http://www.curriculumandinstruction.org/index.php?lay=show&ac=article&Id=539134523&Ntype=7>
- [13] Dick, W. & Cary, L. (1990). The Systematic Design of Instruction, Third Edition, Harper Collins
- [14] Fitz-Gibbon. carol Taylor. Lyons Morris and Lynn. ji.auth. (1987). How to design a program evaluation. Newbury Park : Sagh.
- [15] Gerlach, J. M. (1994). "Is this collaboration?" In Bosworth, K. and Hamilton, S. J. (Eds.), Collaborative Learning: Underlying Processes and Effective Techniques, New Directions for Teaching and Learning No. 59. [Online] <http://archive.wceruw.org/cl1/CL/moreinfo/MI2A.htm>
- [16] Joyce, B. and Weil, M. (1986). Models of Teaching (3th ed.). Englewood Cliffs, N.J.: Prentice Hall
- [17] _____. (2009). Models of teaching (8th ed.). New York: Courtesy of Reece Galleries
- [18] Kemp, J. E., Morrison, G. R., & Ross, S. M. (1994). Designing effective instruction. New York: Merrill.
- [19] Krejcie, R.V., & Morgan, D.W. (1970). Determining Sample Size for Research Activities. Educational and Psychological Measurement, 30, 607-610.
- [20] Kurt, S. (2015). ASSURE: Instructional Design Model, in Educational Technology, November 23, 2015. Retrieved Retrieved July 4th 1, 2018, from <https://educationaltechnology.net/assure-instructional-design-model/>
- [21] ONEC. (2003). Education in Thailand 2002/2003. Bangkok: ONEC Publication
- [22] Reiser, R. A., & Dick, W. (1996). Instructional planning: A guide for teachers (2nd Ed.), Boston: Allyn & Bacon.
- [23] Seels, B., & Glasgow, Z. (1990). Exercises in Instructional Design. Columbus: Merrill.
- [24] _____. (2015). All rights reserved First edition. Published in 2014 the United Nations

- [25] Educational Scientific and Cultural Organization. France : Paris.
- [26] Nilsook, P. and Wannapiroon, P. (2012). Blended e-Learning Activities for the Information and Innovation Management Course: Its Outcomes of Graduate Students' Bangkok-Thonburi University. International e-Learning Conference 2012 (IEC2012). Convention Center, Hall 9, IMPACT, Muang Thong Thani, Thailand, June 14-15, 2012. page 221-227.
- [27] Wiriyaichitra, A. (2002). English-language teaching and learning in Thailand in this decade. Thai TESOL Focus, 15(1), 4-9