An Assessment of Satisfaction with Method of Teaching-Learning Activities Based on Learner-Centered Techniques in English through Multimedia Courses of Undergraduate Students

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ABSTRACT

Bundit Anuyahong (2011). *An Assessment of Satisfaction with Method of Teaching-Learning Activities Based on Learner-Centered Techniques in English through Multimedia Courses of Undergraduate Students*

The purposes of this research were to assess satisfaction with the method of teaching-learning activities based on learner Centered technique in English through multimedia course to Thai-Nichi Institute of Technology students in five aspects: curriculum, teaching – learning process, teaching materials, instructors and others (evaluation and supporting resource) and to gather supplemental suggestions.

Research samples were 128 Thai-Nichi Institute of Technology students derived through simple random sampling technique. The Instrument used for gathering the data were the rating-scale and open-ended questionnaire. Statistics used for analyzing the data were frequency, percentage, mean, standard deviation and content analysis.

Research findings were as follows: 1. Satisfaction with the method of teaching-learning activities based on learner centered technique in English through multimedia course to Thai-Nichi Institute of Technology students as a whole was in high level. When considered in each aspect, it was found that their satisfaction was at high level on curriculum, teaching-learning process, teaching materials, and instructors, while their satisfaction on others (evaluation and supporting resource) was at a moderate level. 2. Thai-Nichi Institute of Technology students had supplemental suggestions: the TNI should organize the curriculum which contains various dimensions and to manage flexibly for learners' needs in curriculum. In addition, teaching should be organized according to lesson plans in course outline. Teachers should organize more activities in teaching-learning process. Innovation materials should be applied to learners in teaching materials. Moreover, teachers should teach how to do examination and they should provide more modern computer and equipments in the classroom in supporting resource.

Keywords - *An Assessment of Satisfaction, Learner Centered Technique, English through Multimedia Course*

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Bundit Anuyahong

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Dedicated
to
my parents

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CHAPTER ONE

INTRODUCTION

In the recent time, instructional curriculum of foreign language is based on National Education Act of B.E.2542 section 22 as it stipulated that Education shall be based on the principle that all learners are capable of learning and self-development, and are regarded as being most important. The teaching-learning process shall aim at enabling the learners to develop themselves at their own pace and to the best of their potentiality. And Section 24 in organizing the learning process, educational institutions and agencies concerned shall provide substance and arrange activities in line with the learners' interests and aptitudes, bearing in mind individual differences, provide training in thinking process, management, how to face various situations and application of knowledge for obviating and solving problems, organize activities for learners to draw from authentic experience; drill in practical work for complete mastery; enable learners to think critically and acquire the reading habit and continuous thirst for knowledge, achieve, in all subjects, a balanced integration of subject matter, integrity, values, and desirable attributes, enable instructors to create the ambiance, environment, instructional media, and facilities for learners to learn and be all-round persons, able to benefit from research as part of the learning process. In so doing, both learners and teachers may learn together from different types of teaching-learning media and other sources of knowledge, enable individuals to learn at all times and in all places. Co-operation with parents, guardians, and all parties concerned in the community shall be sought to develop jointly the learners in accord with their potentiality (Ministry of Education 1999: 14).

Thai-Nichi Institute of Technology has been operated under the philosophy of “disseminating knowledge, building economic base”. The objective of the institute is to generate human resources who have abilities in technological advancement and industrial management. Moreover, TNI concept of program administration is to focus on the students’ language skills- the students will be able to communicate in Japanese and English. In order to achieve in the TNI objectives, TNI has provided English through multimedia course which is an elective course for students from all faculties from each faculty to enroll (TNI Student Handbook: 2010: 24). The assessment of satisfaction in learning, however, is one of the most significant factors to motivate learners to be interested in English learning. Due to English is the subject used for communicating in globalization age, the satisfaction in doing English activities is a pleasure derived from physical environment, a pleasure from participation and a pleasure from absorbing the activities (Apple White 1956: 78). Moreover, the human satisfaction is presented in a form of abstract behavior. To recognize the satisfaction in learning is originated from observations. Currently, TNI has offered the English courses for students from all faculties for three and a half year. However, TNI has lacked of a well research to find out information to verify the assessment of satisfaction of the students towards English through multimedia subject and the methodology to encourage students to learn English effectively and efficiently in order to achieve in the TNI objectives included the needs and the motivations (Wolman 1973: 304). Nowadays, classroom teaching is to teach the students the new knowledge by lecturing and any other types of the old-fashioned techniques. The teachers must make the well-defined lesson plans to indicate the objectives of the study, teaching-learning techniques as well as the evaluation and learning outcomes (Penkhae Prachonpachanuk 2009:1-2). In addition, the teachers should introduce the learner centered technique in their classroom teaching. According to this, Malcolm Knowles (1970: 39-41), who is known as

the founder of Adult Education in the United States, explained that in order to help adults to learn, we should use the special type of teaching which is called Andragogical Model or Learner Centered Model**.**

The main concepts of learner centered model of teaching are derived from Penkhae Prachonpachanuk (2009:1-2) as she demonstrated that the learners have former experiences in learning activity; the learners are dependent and able to do their own learning; learning outcomes will be more effective when the subject centered style is shifted to the problem centered style; learning activity is arranged to adapt with the learning needs of the learners to the evaluation of learning outcomes; and the teachers will facilitate the learners to learn step by step, that is to create the learning climate, diagnose the learning needs, formulate the objectives and design into the learning experiences, select the suitable techniques and experiences and finally evaluate the learning outcomes. Three most important things in learning are learning atmosphere, participation in learning and flexible teaching method and techniques (Knowles, 1970: 40).

At present, the learner centered technique of teaching is accepted and applied in schools around the world. Moreover, some other new techniques are also introduced in teaching the classes. The learners' former experiences are used in their own learning. Self-study, therefore, is used as a significant part of learning activity. Hence, the language learning is arranged from various channels to the students. In Thailand, the technique of learner centered model was used in schools at all levels. Thai-Nichi Institute of Technology, the College of General Education and Languages has also started to use this teaching model since 2008 to teach English and Japanese language to the students.

In the study, researcher studied the satisfaction in learning English through multimedia subject of the students at Thai-Nichi institute of Technology by creating research tool as questionnaire in order to survey

satisfaction in English learning. This research was categorized into 5 aspects: curriculum; teaching-learning process; teaching materials; instructors and others (evaluation and supporting resource). This survey research was purposely focused on the TNI students from 3 faculties of Business Administration, Engineering, Information Technology in 2010 academic year. By this way, the results gained from the research will be used as a channel to solve, improve and develop teaching-learning process as well as teaching materials to be more effective and more efficient.

Research Objectives

1) To assess satisfaction in learning English through multimedia course by using learner centered technique of Thai-Nichi Institute of Technology students in 5 aspects; curriculum, teaching-learning process, teaching materials, instructors, and others (evaluation and supporting resource)

2) To gather opinions and suggestions from Thai-Nichi Institute of Technology students in term of teaching-learning activities based on learner centered technique in English through multimedia course.

Research Questions:

1) What satisfaction level in learning English through multimedia course which taught by learner centered technique do Thai-Nichi Institute of Technology students have?

2) How do Thai-Nichi Institute of Technology students have opinions and suggestions about learning English through multimedia course which taught by learner centered technique?

Significances of research

1) The results from the research presented the satisfaction level in learning English through multimedia course which taught by learner centered technique of Thai-Nichi Institute of Technology students in order to develop teaching-learning process techniques applied for the next semester.

2) The suggestions from the research are used as a plan to improve the method of teaching and learning in English through multimedia course of Thai-Nichi Institute of Technology students to be more effective and efficient.

Scope of the study

A. Population and Sample

This research was survey method in satisfaction in learning English of Thai-Nichi Institute of Technology which consisted of population and sampling as follows:

Populations of this research were 150 TNI students in 3 faculties namely faculty of Business Administration, Faculty of Engineering, and Faculty of Information Technology in 2010 academic year which derived from enrollment in English through multimedia course.

Samples of this research were 128 TNI students derived through Simple Random Sampling technique.

B. Variable

Variable in study is satisfaction in learning English through multimedia course of TNI students.

Definition of Terms

For this study the following terms were defined:

1. Satisfaction - satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses of TNI students in five aspects:

1.1 In curriculum, TNI students' satisfaction in curriculum such as English textbooks are suitable to level of learners, contents of textbooks are arranged from basic to advance, contents of English textbooks are suitable to practice and application, schedule of time management in learning are suitable, learners can apply instruction in daily life, 3 hours per week are suitable, and curriculum are employed in learner-centered style.

1.2 In teaching-learning process, TNI students' satisfaction such as supplementary materials are applied in the classroom, learning by doing is taught in classroom, learner-centered techniques are employed in the classroom, listening and speaking classes are taught by foreign teachers every week, self-study is applied in and outside the classroom, summative test is used in each unit, and criteria of evaluation is suitable.

1.3 In teaching materials, TNI students' satisfaction such as English songs are applied to motivate EFL learners in the class, Multimedia materials are used in the classroom, sound lab room is provided for learners appropriately, teaching materials on the internet is employed in the classroom to enhance reading and listening skills, Computer-Assisted Language Learning is applied in the class, cooperative learning, problem solving, questioning, and small group discussion are integrated in activity of each unit, and supplementary materials are suitable to learners.

1.4 In instructors, TNI students' satisfaction such as instructors make learning environment to support good environment in the classroom, instructors are good idols in learning English to learners, new contents are inserted by instructors to motivate learners in English learning, instructors develop and apply new knowledge to learners, instructors give opportunity to learners to ask questions both in class and outside class, instructors explain the importance and goals in learning English language to learners, and instructors have techniques and excellent skills in teaching English.

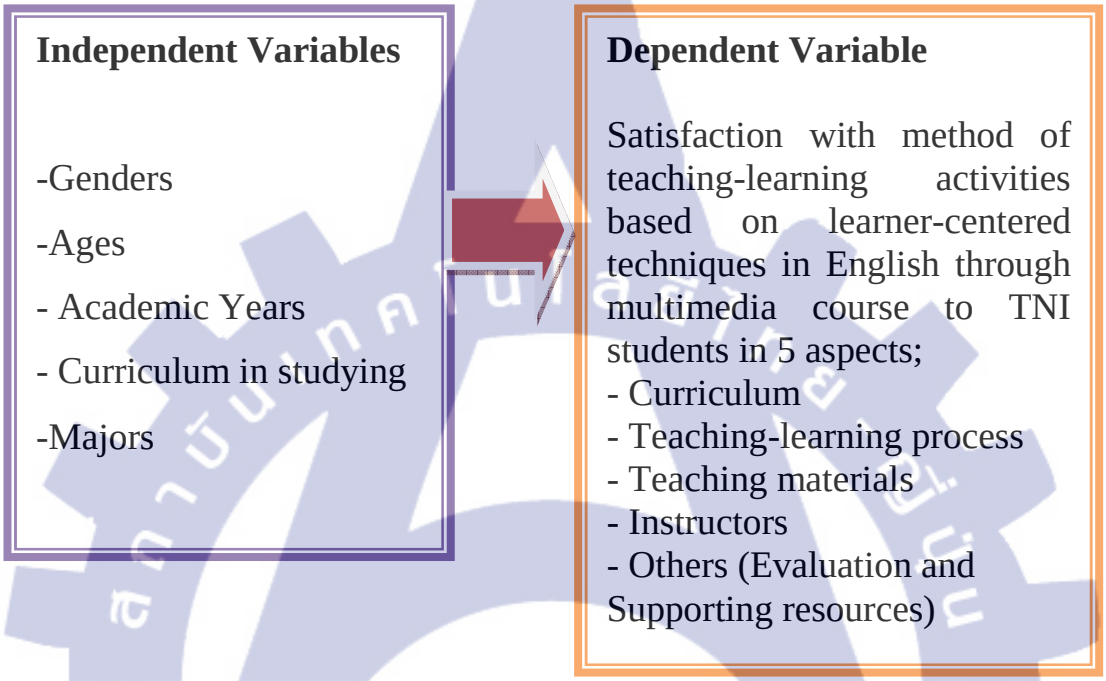
1.5 In others (evaluation and supporting resource), TNI students' satisfaction such as evaluation of results of examination is suitable, evaluation of results of self-learning activity is suitable, evaluation of both practicing and theory part is suitable, Wi-Fi internet provided both in classroom and outside the classroom is suitable, computers in the classroom are modern and suitable for learners, classroom environment is suitable, and textbooks and referenced books are provided in library appropriately.

2. Students- The 128 Thai-Nichi Institute of Technology students from 3 faculties namely faculty of Business Administration, Faculty of Engineering, and Faculty of Information Technology in 2010 academic year which derived from enrollment in English through multimedia course.

3. The questionnaire- The questionnaire for assessment of satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia course to TNI students which was divided into three sections. The first section consisted of personal data, such as genders, ages, academic years, curriculum, and major. The second section consisted of 35 questions in 5 aspects: curriculum, teaching-learning process, teaching materials, instructors, and others (evaluation and supporting resource). Respondents used 5 point scale to answer this section, which are 1= "Strongly disagree," 2= "Disagree," 3= "Neither agree nor disagree," 4= "Agree," 5=

"Strongly agree." The third section was open-ended questionnaire which consisted of 5 aspects: curriculum, teaching-learning process, teaching materials, instructors, and others (evaluation and supporting resource).

Conceptual Framework



CHAPTER TWO

REVIEW OF THE LITERATURE

This chapter provides the relevant literature consisting of eight major domains: 1) Background of Thai-Nichi Institute of Technology 2) Improving the Quality of Teaching and Learning Processes 3) The Learner-Centered Approach 4) Characteristics of Learner-Centered Classrooms 5) The Comparison between Learner-Centered and Teacher-Centered Instruction 6) a Model for Designing Learner-Centered Instruction 7) Instructional Techniques based on the Learner-Centered Approach and 8) Research on Learner-Centered Approaches.

Background of Thai-Nichi Institute of Technology

Philosophy of TNI

Technology Promotion Association (Thailand-Japan), the TNI's founder, has been operated under the philosophy of "disseminating knowledge, building economic base" reflecting the clear direction and goal in the operation and services of TPA thoroughly over 35 years which as a bridge of technology dissemination on management and engineering from Japan to the Thai personnel widely, TPA has taken a major part in cultivating human resources to be competent in knowledge and skills in order to help develop the Kingdom's economy.

TNI establishing committee contemplated that the philosophy of TPA and TNI regarding organizational operation must be in accordance with each other in order to proliferate the value of activities and services and expand the servicing role by aiming TNI to be an academic institute focusing on creating and developing the Kingdom's personnel, a resource for creating new knowledge and a channel for disseminating knowledge to society, especially industrial sector. Therefore, the TNI philosophy for operation is for *"Developing knowledge, enriching industry for economy and society"*

Mission

"Thai-Nichi Institute of Technology is an academic institute which was established to be an academic and high-level specific vocational centre, a resource to develop the Kingdom's personnel in industrial technology and administration to be excellent in academic area, applying and disseminating knowledge to society by adhering virtue and social conscience"

Objectives of TNI

The objectives for establishing TNI is to provide education at undergraduate level focusing on technology, social sciences and humanities. The TNI's missions are teaching, producing graduates, conducting researches, providing academic services to society and maintaining arts and culture of the Kingdom which are to provide education at undergraduate and graduate levels in the fields of science, technology, social sciences and humanities by focusing on practice and theoretical knowledge, to be a leading academic institute in the area of research and development and to create modern knowledge continuously, to be the center of competent academics and consultants of the nation as well as to promote the cooperation of high level knowledge research, to strengthen the role of researchers in creating the enterprise and industry in Thailand, to transfer technology from Japan and other countries by linking the relationship with

academic institutes, governmental and private organizations in Japan and other countries in order to create cooperation by exchanging in term of experts, research and development programs, educational trainings and study tours to other countries, to provide academic services to society such as short-term courses, trainings, consultancy for industrial entrepreneurs as well as the exchange of knowledge in technology to entrepreneurs, administrators, engineers and industrial technicians, to encourage activities which help preserve and arts and culture of Thailand and Japan (Thai-Nichi Institute of Technology, 2010:10).

The Objectives of TNI Teaching and Learning Program

Graduates of TNI are competent in skills based on the demand of Thai industry, practice and theory application. In language skills, they are able to communicate in Japanese and English. Moreover, they are able to work for Thailand-Japan joint venture companies or Japanese investors, and manage their own business

TNI Concept of Program Administration

For TNI concepts of program administration are divided in five aspects as follows.

1. Technology advancement has been rapidly changed; therefore, competency development of personnel according to the technological diversification has become significant. Therefore, TNI's concept of program administration focusing on the Competency-Based Education to prepare students for performing their job based on demand of entrepreneurs. The competency covers the following areas.

2. Technical Competency, which is the specific competency of every certain course. Every program aims their students to be practitioners and experts in applying theories, principles, concepts and technologies into their work

through different teaching processes such as working in workshops, conducting projects, taking study tours and training for the entrepreneurs, inviting Thai and Japanese experts to share experiences and study tours to Japan, etc.

3. Managerial Competency, TNI provides basic knowledge and skills in business administration for entrepreneurs that can be applied in the levels of individual, group and organization, therefore, TNI graduates shall have high potentials for prospect careers.

4. Language Competency, TNI concerns about the significance of communication, knowledge and the exchange of knowledge and borderless technology. Therefore, TNI emphasizes language competency in speaking, reading and writing. Apart from English courses and elective courses, TNI students have language competency in English and Japanese business communication so that they can be competitive in labor market and have opportunity for continuing their further study in Japan and other countries.

5. Ethics and Human Relation Competency, TNI adds teamwork concept and ethics in performing their work in every program. TNI graduates can utilize their discretion to analyze and make decision in any operation by considering principles of rightfulness and justice. (Thai-Nichi Institute of Technology, 2010:12).

Improving the Quality of Teaching and Learning Processes

The 1999 National Education Act authorized the implementation of the Basic Education Curriculum B.E. 2544. Condition and the time-frame for application are as below: The curriculum shall respond to social and economic changes as well as changes in nature of education. Instructors shall adjust their teaching and evaluating procedures accordingly, in order to fulfill ever-changing needs of learners and to encounter ever changing situation in economic, social and cultural spheres. Education progress can be achieved when

curricular adjustment and adaptation are continuously undertaken to respond to needs and necessity.

For improving the quality of teaching, National Education Act A.D. 1999 Section 22 stipulates guidelines for learning management that education shall be based on the principle that all learners are capable of learning and self-development, and are regarded as being most important. Therefore, teachers, instructors and administrators must change their roles from guiding and knowledge transferring to helping, promoting and encouraging learners in the acquisition of knowledge from various media and learning centers.

The Learner-Centered Approach

In a learner-centered approach, "learners are closely involved in the decision-making process regarding the content of the curriculum and how it is taught" (Nunan, 1988: 2). A learner-centered approach also referred to as a student-centered or child-centered approach involving collaboration between teachers and learners; through ongoing dialogue, they determine the content of the curriculum and the learning objectives. This approach focuses on learners' real-life needs; learner responsibility in setting personal and realistic goals and determining the steps toward achieving those goals; flexibility—as students progress and reflect on their learning, content and goals may be modified; and learner self assessment.

McCombs (2000) pointed out that the learner-centered framework focuses on:

• The Learner and each learner's perceptions, needs, and motivation

• Learning Opportunities and the types of teaching and learning experiences that can meet learner needs for success, belonging, and autonomy

• Learning Outcomes that include affective, cognitive, social, and performance domains

• The Learning Context or climate for learning, including expectations, teacher and technology support, time structures for collaboration, learning partnerships and mentoring relationships, and adaptability to student needs.

Learner-Centered Curriculum

The concept of a learner-centered curriculum should be based not on separate subjects, but rather on the emerging world of the learner. The important issues for proponents of this organization are the interests, needs, problems, and concerns of the learner (Beane. 1994: 60). The learner-centered curriculum establishes the learner as the most significant and essential person in the teaching-learning process. Learner-centered means: making student goals the focus of instructional design. Learner-centered learning reverses the traditional pedagogical structure of teacher lecturing to a group of students. In learner-centered approach, learners have the opportunity to explore, gather and generate meaning from their educational experiences while a teacher acts as a guide, and a participating learner, in the educational setting.

Learner-Centered Curriculum Development

Learner-centered curriculum development thus differs from traditional curriculum development methods, in which the planning process takes place in advance without student input, and a lockstep order for instruction and evaluation is followed. A learner centered curriculum uses learners' background knowledge and experiences as a starting point for curriculum development by emphasizing a collaborative effort between teachers and learners, characterized by ongoing dialogue to determine the content and learning objectives for the course.

According to Nunan (1988 : 2-7), a curriculum will contain similar elements to those contained in traditional curriculum development, that is, planning (including needs analysis, goal and objective setting), implementation

(including methodology and materials development) and evaluation. However, the key difference between learner-centered and traditional curriculum development is that, in the former, the curriculum is a collaborative effort between teachers and learners, since learners are closely involved in the decision-making process regarding the content of the curriculum and how it is taught. This change in orientation has major practical implications for the entire curriculum process, since a negotiated curriculum cannot be introduced and managed in the same way as one, which is prescribed by the teacher or teaching institutions. In particular, it places the burden for all aspects of curriculum development on the teacher. In the curriculum planning process proposed by Taba (1962), planning, implementation and evaluation occur in sequential order, and most of the key decisions about goals and objectives, materials and methodology are made before there is any encounter between teacher and learner. One of the major assumptions underlying the learner-centered philosophy is that, given the constraints that exist in most learning contexts, it is impossible to teach learners everything they need to know in class. Inconsequence, goals will relate to development of learning skills as following:

- To provide learners with efficient learning strategies
- To assist learners to identify their own preferred ways of learning
- To develop skills needed to negotiate the curriculum
- To encourage learners to set their own objectives
- To encourage learners to adopt realistic goals and time frames
- To develop learners' skills in self-evaluation.

The adoption of a learner-centered orientation implies differentiated curricula for different learners. This is because it is unrealistic to expect extensive participation in curriculum planning by learners with little experience of learning. When dealing with inexperienced learners, it is often necessary for the teacher to begin by making most of the decisions. For at reason the curriculum

is conceptualized, as much by processes for carrying out curriculum tasks as by products.

The Learner-Centered Curriculum Process

The key elements in the curriculum model proposed here are as follows: initial planning procedures (including data collection and learner grouping); content selection; methodology (which includes the selection of learning activities and materials); and ongoing monitoring, assessment and evaluation. A brief description of these elements and their functions within a learner-centered curriculum follow and are elaborated upon in this section (Krashen 1987: 35-40; Sharp, 2006:12; Huba & Freed, 2002).

The first step in the curriculum process is the collection of information about learners in order to diagnose their objective needs, that is, needs which are external to the learner. This initial data collection is usually superficial, relating mainly to factual information such as current proficiency level, age, educational background, and previous learning experiences. It is also sometimes possible to obtain more subjective information relating to preferred methodology, learning-style preferences. However, this sort of information, relating to learner's subjective needs as an individual in the learning situation, can often only be obtained once a course has begun.

Content selection is an important component of a learner-centered curriculum. In such a curriculum clear criteria for content selection give guidance on the selection of materials and learning activities and assist in assessment and evaluation. By making explicit the content objectives of a course and, eventually, by training learners to set their own objectives, the following benefits can accrue:

• Learners come to have a more realistic idea of what can be achieved in a given course.

• Learning comes to be seen as the gradual accretion of achievable goals.

• Learners develop greater sensitivity to their roles and their rather vague notions of what it is to be a learner become much sharper.

• Self-evaluation becomes more feasible.

• Classroom activities can be seen to relate to learners' real-life needs. Skill development can be seen as a gradual, rather than an all-or-nothing, process. A crucial distinction between traditional and learner-centered curriculum development is that, in the latter, no decision is binding. This is particularly true of content selection and gradation. These will need to be modified during the course of programmed delivery as the learners' skills develop, their self-awareness as learners grows and their perceived needs change. The selection of content and objectives is therefore something, which is shaped and refined during the initial stages of a learning arrangement rather than being completely predetermined. This is because the most valuable learner data can usually only be obtained in an informal way after relationships have been established between teachers and learners. The initial data collection, which is used principally for grouping learners, generally provides only fairly superficial information which can be used to make rough predictions about communicative needs, the most useful information, relating to subjective learner needs, can be obtained only once a course has begun and a relationship is established between teacher and learners. It is these subjective needs, derivable from information on learners' wants, expectations and needs, which are of most value in selecting content and methodology (Krashen 1987: 35-40; Sharp, 2006:12; Huba & Freed, 2002).

Methodology, which includes learning activities and materials, is generally the area where there is the greatest potential for conflict between teacher and learner. In a traditional curriculum, this conflict would probably be ignored on the grounds that the 'teacher knows best'. In a learner-centered curriculum, it is crucial that any conflicts be resolved. Evaluation is the final component in the curriculum model. Traditionally, evaluation occurs at the final

stage in the curriculum process. In the model proposed here, however, evaluation is parallel with other curriculum activities and may occur at various times during the planning and implementation stage, as well as during a specified evaluation stage. The purpose of assessment is to determine whether or not the objectives of a course of instruction have been achieved. In the case of a failure to achieve objectives, it is the purpose of evaluation to make some determination of why this has been so. Questions relating to evaluation include the following:

• Who is to evaluate?

• How are they to evaluate?

• What are they to evaluate?

• At what point in the curriculum process will evaluation occur?

• What are the purposes of the evaluation? In other words, what will happen to the curriculum as a result of evaluation activities?

Characteristics of Learner-Centered Classrooms

McCombs and Whisler (1997 : 65-66) pointed out characteristics of learner-centered classrooms as follows:

In learner-centered classroom, the students

• Choose their own projects

• Work at their own individual pace

• Show excitement about learning new things

• Demonstrate their knowledge in unique ways

• Are actively engaged and participating in individual and group learning activities

• Do beyond minimal assignments

In learner-centered classrooms, the teachers

• Make it clear that he/she has high expectations for all students

• Listens to and respects each student’s point of view

• Encourages and facilitates students' participation and shared decision making

• Provides structure without being overly directive

• Encourages students to think of themselves

• Emphasizes student enjoyment of activities

• Helps students refine their strategies for constructing meaning and organizing content

In leaner-centered classrooms, the instructional strategies and methods

• Use time in variable and flexible ways to match student needs

• Include learning activities that are personally relevant to students

• Give students increasing responsibility for the learning process

• Provide questions and tasks that stimulate students' thinking beyond rote memorizing

• Help students refine their understanding by using critical thinking skills

• Support students in developing and using effective learning strategies

• Include peer learning and peer teaching as part of the instructional method

In learner-centered classroom, the curriculum

• Features tasks that stimulate students' varied interests

• Organizes content and activities around themes that are meaningful to students

• Has explicit built-in opportunities for all students to engage their higher-order thinking and self-regulated learning skills

• Includes activities that help students understand and develop their own perspectives

• Allows learning activities that are global, interdisciplinary, and integrated

• Encourages challenging learning activities, even if students have difficulty

• Features activities that encourage students to work collaboratively with other students

In learner-centered classrooms, the assessment system

• Assesses different students differently

• Includes student input in design and revision

• Monitors progress continually in order to provide feedback on individual growth and progress

• Provides appropriate opportunities for student choice of types of products for demonstrating achievement of educational standards

• Promotes students' reflection on their growth as learners through opportunities for self-assessment

• Allows diversity of competencies to be demonstrated in a variety of ways

The Comparison between Learner-Centered and Teacher-Centered Instruction

Huba and Freed (2000: 5) have compared the difference of Teacher-Centered Paradigm to Learner-Centered Paradigm as shown in Table 2.

Table 1: Comparison of Teacher-Centered and Learner-Centered Paradigms

Teacher-Centered Paradigm	**Learner-Centered Paradigm**
Knowledge is transmitted from teacher to students.	Students construct knowledge through gathering and synthesizing information and integrating it with the general skills of inquiry, communication, critical thinking, problem solving, and so on.
Students passively receive information.	Students are actively involved.
Emphasis is on acquisition of knowledge outside the context in which it will be used.	Emphasis is on using and communicating knowledge effectively to address enduring and emerging issues and problems in real-life contexts.
Teacher's role is to be the primary information giver and primary evaluator.	Teacher's role is to coach and facilitate. Teacher and students evaluate learning together.
Teaching and assessing are separate.	Teaching and assessing are intertwined.
Assessment is used to monitor learning.	Assessment is used to promote and diagnose learning.
Emphasis is on right answers.	Emphasis is on generating better questions and learning from errors.
Desired learning is assessed indirectly through the use of objectively scored tests.	Desired learning is assessed directly through papers, projects, performances, portfolios, and the like.
Focus is on a single discipline.	Approach is compatible with interdisciplinary investigation.
Culture is competitive and individualistic.	Culture is cooperative, collaborative, and supportive.
Only students are viewed as learners.	Teacher and students learn together.

A Model for Designing Learner-Centered Instruction

According to Faculty Development Institute, Virginia Tech (2003: Online), the processes of teaching, learning, and the design of instruction are interrelated. The table below presents a summary of current educational research in terms of the characteristics of learning and how instructional design and the role of the instructor can take these characteristics into account.

Table 2: The processes of teaching, learning and the design of instruction

Learning	Design of Instruction	Teaching
Is active It requires purposeful processing.	Design activities that involve students wholeheartedly in the learning process.	Actively engage students by developing meaningful activities for which they need the curriculum.
Is constructive New learning is built upon existing knowledge.	Design activities that build on students' current knowledge and that encourage the understanding of relationships.	Help students construct powerful, organizing concepts that they can use to reach more complex levels of understanding.
Is individualized Learning is unique because of its relationship to past knowledge and experience.	Design activities that allow various student strengths to be developed and that encourage students to see connections between their studies and the rest of their lives.	Provide various explanations and roads to understanding so students can build on their own previous understandings.
Is contextual What is learned is dependent upon the context in which it occurs.	Design activities that reflect real world situations that students will encounter when they leave the classroom.	Provide a classroom context that guides students in thinking "outside the classroom" and asks them to continually consider how subject matter can be related to real life issues and problems.
Takes time Learning involves many hours of assimilating, restructuring, and practicing with guidance.	Design activities that require both time and practice spent on the kinds of learning outcomes you wish students to achieve. Guide them as they work.	Develop activities that allow flexible time commitments to mastery and that build on students' previous course and life experiences.

Furthermore, learning how to learn is more important than just memorizing information. Learner-centered instruction encourages participation, analysis and critique and also leads to lifelong learning. Many researches supported the notion that the leaner centered approach can enhance the learning achievement and learning skill of students. For these reasons, the researcher wanted to assess satisfaction in learning English through multimedia course which taught by learner centered technique of Thai-Nichi Institute of Technology students. The instructional techniques used in designing the teaching-learning process for the lesson plans consist of four instructional techniques as follows:

1) Cooperative Learning
2) Problem Solving
3) Small Group Discussion
4) Teaching by Questioning

The details of each instructional technique were described in the next section.

Instructional Techniques based on the Learner-Centered Approach

In traditional instruction, the teacher's primary functions are lecturing, designing assignments and tests, and grading. In learner-centered instruction, the teacher still has these functions but also provides students with opportunities to learn independently and coaches them in the skills they need to do so effectively. In recent decades, the education literature has described a wide variety of learner-centered instructional methods and has offered countless demonstrations that properly implemented learner-centered instruction where increased motivation to learn, greater retention of knowledge, deeper understanding, and more positive attitudes toward the subject being taught (Felder; & Brent, 1996: Online).

The purpose of learning in the learner-centered approach is not just memorizing information to pass examinations, although passing examinations is obviously important.

Learning now focuses on subjects and activities that are relevant and useful to the lives of students, things that they can connect with and use in their own lives. The goal of learning is understanding and making the world meaningful rather than just memorizing facts that may have no connection with the learners' lives.

The students have roles in the learner-centered model; they are not passive recipients of knowledge. They are active learners. Although they receive and memorize information from the teacher and textbooks, they do much more than this. First, they use the information given by the teacher or the textbook in new and creative ways. They discuss it, communicate about it, analyze it and evaluate it. In addition, the students also collect information on their own from their environment, record it systematically, discuss it, compare it, analyze it, draw conclusions from it and communicate about it. The teachers' role in the learner-centered model is different from traditional approach; teachers are not only to give information, but to organize the activities from which students will gather or use information, to guide the students through these activities, to help them find additional sources of information, to make sure they are really thinking and analyzing, to check their progress regularly to make sure all students are learning, and to give help when students do not understand (Elizabeth. 2003 : Online).

To be consistent with the National Education Act A.D.1999 and the Basic Education Curriculum A.D.2001, teaching-learning processes of this science curriculum will be based on learner-centered approaches and use various learning activities which help students to develop thinking processes, learning skills, and communication skills. Learners will be engaged to take responsibility for their own learning and participation in class. Learners will develop thinking

skills such as creativity, critical thinking, problem solving, decision making, and communication. Learner will also develop skills in reading, writing, investigating data, gathering data, analyzing data, summarizing data and presenting data. For these reasons, the researcher chose four instructional techniques to design the lesson plans for the draft curriculum. These four instructional techniques were: 1) cooperative learning, 2) problem solving, 3) teaching by questioning, and 4) small group discussion.

1) Cooperative Learning

There is strong agreement among researchers that cooperative methods can and usually do have positive effects on student achievement. Many studies have shown that cooperative learning promotes critical thinking skills, helps develop higher level thinking skills, fosters metacognition in students, encourages student responsibility for learning, increases student retention and builds self-esteem in students (Slavin, 1994). In addition, cooperative learning is a very useful method for checking on understanding and helping to teach a variety of learning strategies (McKeachie. 2002: 279).

Cooperative learning allows students to work together in small, mixed-ability groups. The teacher's role shifts from learning disseminator to learning facilitator. The responsibility for learning shifts from the teacher to the student. In addition, when students work together, they have the opportunity to critique and revise each other's ideas and can respond to guidance. Gillies and Ashman (2003: 12) stated that "when children interact together, they have opportunities to model their thinking, reasoning and problem-solving skill on each other, receive feedback, and as a result socially construct new understandings, knowledge and skills". As mentioned above, cooperative learning will be used as one technique in designing teaching-learning processes.

2) Problem Solving

The purpose of using problem solving was to give students experience in identifying and resolving a problem. Teaching by using problem solving could help student develop analytical and thinking skills. The problem-solving approach to teaching is an effective way to improve student achievement. Using problem-solving method will make students active participants in learning (Lambros. 2002: 8). In addition, Weir (1974:16) pointed out that a significant proportion of classroom time in science is spent on problem-solving activities. A constant emphasis on problem-solving techniques can help students realize that thinking is a skill, which can be developed and improved.

In this study, the class was divided into small groups of four to five students to solve problems. Each group was provided worksheets or assignments including the problem situations and questions, and then students in each group work together to solve problems. The problems in each worksheet were adapted from articles in newspaper, magazine and Internet. Each problem situation related to the content of learning unit such as household chemicals, contaminants in foods, and the impact of chemicals on health and environment.

In this study, the problem-solving process that students used in learning activity was adapted from the process of problem solving of Weir (1974 : 17) consisting four main steps:

1) Statement of the problem, 2) Defining the cause of the problem, 3) Searching and formulating a plan to solve the problem, and 4) Summarizing the result of problem solving and applying in daily life. 3) Teaching by Questioning

3) Questioning

Questioning is one of the most popular modes of teaching. Using questioning during a class can stimulate thinking, assess student progress, motivate students to pay attention, maintain classroom control, provide repetition, emphasize key points, and many more things.

McMillan (2004: 116) stated that “teachers use questions for five major purposes: to involve students in the lesson, to promote students’ thinking and comprehension, to review important content, to control students, and to assess student progress”. Questions serve as a teaching tool by which instructors manage and direct learning, test student understanding, and diagnose problem areas.

Asking questions helps students develop cognitive abilities and critical thinking skills. It also helps to promote classroom discussion by taking the focus off the instructor and encouraging student to student interaction.

To gain useful information for designing teaching-learning processes, the related literature on questioning was reviewed under four domains: 1) What is a good question?, 2)How to ask question that foster student achievement, 3) Levels and types of questions, and 4) Research on teaching by questioning.

In a research review on questioning techniques, Wilen and Clegg (1986: 23) suggested teachers employ the following research supported practices to foster higher student achievement; 1) phrase questions clearly 2) ask questions of primarily an academic nature 3) allow three to five seconds of wait time after asking a question before requesting a student's response, particularly when high-cognitive level questions are asked 4) encourage students to respond in some way to each question asked 5) balance responses from volunteering and non volunteering students 6) elicit a high percentage of correct responses from students and assist with incorrect responses 7) probe students' responses to have them clarify ideas, support a point of view, or extend their thinking 8) acknowledge correct responses from students and use praise specifically

Questions can be categorized in a variety of ways. A familiar categorical structure is provided by Benjamin Bloom's taxonomy of objectives in the cognitive domain. Bloom's taxonomy is a hierarchical system of ordering thinking skills from lower to higher. Table 4 shows the levels of the taxonomy, a brief explanation of each one, and examples of questions, which require

students to use thinking skills at each level (Division of Instructional Development. 2003: Online).

Table 3: Question types based on Bloom's Taxonomy

Questioning Category	Bloom's Category	Student Activity	Typical Stem Words
Lower Level	Knowledge	Remembering: Facts, Terms, Definitions, Concepts , Principles	What? , List Name, Define, Describe
	Comprehension	Understanding the meaning of material	Explain, Interpret, Summarize, Give examples, Predict, Translate
	Application	Selecting a concept or skill and using it to solve a problem	Compute, Solve, Apply, Modify, Construct
Higher Level	Analysis	Breaking material down into its parts and explaining the hierarchical relations.	How does .. apply? Why does .. work? How does .relate to.? What distinctions can be made about …and...?
	Synthesis	Producing something original after having broken the material down into its component parts.	How do the data support ...? How would you design an experiment which investigates...? What predictions can you make based upon the data?
	Evaluation	Making a judgment based upon a pre-established set of criteria.	What judgments can you make about ...? Compare and contrast ..criteria for ..?

4) Small Group Discussion

The purpose of using small group discussion was to promote an exchange of information and ideas among members of a group or class. Many research studies conducted on group learning have shown small group discussion to be an effective instructional method (Slavin. 1994; Johnson,D.W; & Johnson, R.T. 1987). Small group discussion helps students to pay attention and think more actively in learning (MaKeachie, 2002: 31). In addition, McMillan (2004: 116), pointed out that "discussions are used to promote student questioning and exchange ideas and opinions to clarify issues, promote thinking, generate ideas, or solve problems". Orlich et al,. (1998: 257) pointed that using small groups is one of the best ways to promote student autonomy, cooperation, and learning in classroom. Small group discussion is an effective way for many students to develop their theoretical frameworks and to learn problem-solving skills as they try out their own ideas on other students and the instructor. Students must learn to explain in their own words about what they are thinking and doing. Students are more motivated to prepare for a class in which they are expected to participate actively. Therefore, small group discussion was used as one technique for this curriculum. The relevant literature to small group discussion was reviewed in the next section, which divided into three domains: 1) Elements of a small group discussion, 2) Planning and guiding discussion, and 3) Research on small group discussion.

In designing the teaching-learning processes of the lesson plans, students work in small groups of four or five. Students worked together to complete worksheet. The students received a handout with the discussion questions and group activities. All students in each group discussed and gave their opinions within their group. As for this assignment, students presented their ideas on a topic. Students from each group presented their work from the small group discussion. The students of each group were asked to give an oral presentation in front of the class after discussion. Other students were enhanced to ask

questions about the topic, its scope and feasibility, and make criticisms or suggestions. The role of the teacher was to provide worksheets and materials for each group, introduced students to small group activities and group assignments. The teacher should demonstrate ways to conduct conversations and ways to store information as well as explain to students how to converse and discuss with the learners how to work together e.g., how the group will make decisions; set ground rules. Teacher should facilitate the learners' active participation, invite learners to process and summarize what occurs during the session, and ask them to discuss with their peers in small groups during the lesson so that they can get more ideas and have a better understanding of the topics. The teacher may assign students' role in each group to keep the discussion going smoothly. Some of the roles might be: question asker, encourager, note taker, reporter, and timekeeper.

Research on Learner-Centered Approaches

There are many studies supportive of the idea that learner-centered approaches are effective ways to teaching-learning process. For example, Meece (2003: 109-116) examined the use of the Learner-Centered Psychological Principles (LCPs) for improving the academic engagement and learning of middle school students. The result from survey data from 2,200 middle school students from diverse communities across the United States indicated many important motivational benefits of learner-centered practices for young adolescents.

According to Fornari's research (2001: Abstract) "The Development of an Ethics Curriculums for Dietetics Students Utilizing Learner-Centered Pedagogy. He developed a learner-centered ethics curriculum that fosters moral development and ethical-decision making in dietetics students preparing to become practitioners. The researcher approached curriculum design as a developmental model. Student cognitive developmental learning theory and

developmental instruction supported this approach. These models focus on how students think; how they receive and interpret information; how they make meaning of the learning process in the classroom. This curriculum was designed by considering students' developmental environment and student characteristics as learners, course content, teaching approaches, and learning outcomes. The research was divided into four stages: (1) needs assessment, (2) draft curriculum document, (3) expert evaluation, and (4) a final curriculum document.

Falk (1993 : Abstract) examined the process of developing a learner-centered curriculum, which based on data collected over a period of several years from observation field notes, from interviews, and from close examination of student work and school documents. The result of this study defines learner-centered curriculum as a way of thinking about teaching and learning that is manifested throughout the actions and attitudes of an entire school. This way of thinking is present not only in classroom curriculum frameworks, but also in assessment systems, school structures and policies and the values embedded within them all.

Tamburo (1986: Abstract) designed learner-centered communicative and creative strategies for use in elementary, intermediate and advanced-intermediate Spanish language classes. The conclusion states that there is already sufficient evidence to suggest that learner-centered strategies can be used to enhance language and communicative skill acquisition, as well as more positive attitudes toward language learning.

Nuchanart Muangmooltree (2002: Abstract) developed teaching-learning activities for the Life-Experience Group (Social Studies) using student-centered instruction for grade 6^{th} students. The research followed an action research procedure. The learning activity consisted of four steps: 1) The introduction 2) The instruction 3) The analysis and conclusion and 4) The evaluation. The result of this study showed that over 80% of students who received a student-centered instruction passed the learning criterion of 75%.

Somchit Sawathanapaibul (2003: Abstract) developed activity package for child centered learning process with multi activities. The study was conducted through four steps:1) Document study for gathering related literatures and researches, 2) Construction draft activity package for child-centered learning process with multi activities, 3) Try-out the package to the sample groups, and 4) Evaluating the activity package. The results of the study revealed that the effectiveness of the package was higher than criterion standard of 80/80. And there was a significant difference at .01 level of learning achievement of experimental group.

Nittaya Yonwichai (2002: Abstract) developed learner-centered instruction activities based on cooperative learning in mathematics of grade 5 students in Thailand. The finding showed that learner-centered instruction activities based on cooperative learning had resulted in meaningful learning in the students. The students who received instruction through learner-centered instructional activities based on cooperative learning had made a mean learning achievement score of 74.14%. The students had developed various personal qualities such as independent concept construct, rational thinking and problem-solving skills, self-confidence and expressiveness. They had also developed group-work skills, the responsibility for one's own action and the group, as well as honesty and cooperation for learning.

In conclusion, learning how to learn is more important than just memorizing information. Learner-centered instruction encourages participation, analysis and critique and also leads to lifelong learning. Many researches supported the notion that the leaner centered approach can enhance the learning achievement and learning skill of students. For these reasons, the researcher wanted to assess satisfaction in learning English through multimedia course which taught by learner centered technique of Thai-Nichi Institute of Technology students in 5 aspects; curriculum, teaching-learning process, teaching materials, instructors, and others (evaluation and supporting resource).

CHAPTER THREE

METHODOLOGY

Chapter three begins with a description of the research design, and the justification for the design. The researcher outlines the participants, setting, research instrument, data collection, data analysis, and statistic used in data analysis as follows.

Participants

The participants in this study were 128 undergraduate students at Thai-Nichi Institute of Technology in Thailand. These students were enrolled in English through multimedia course (ENL-411) during the first semester and second semester of the 2010 academic year. They were studying in six specific fields of Business and Technical areas: Automotive Engineering, Production Engineering, Computer Engineering, Industrial Management, Business Japanese, and Information Technology.

During the academic year of 2010, these TNI students had enrolled in a English through multimedia course (ENL-411) which is elective subject of English Department, College of General Education and Languages, Thai-Nichi Institute of Technology.

Settings

The College of General Education and Languages at Thai-Nichi Institute of Technology, where this study was conducted, is located at Pattanakarn Road in Bangkok, the capital city of Thailand. Four classrooms, used for the participants' English lecture classes in TNI, were utilized for the administration of the research questionnaire.

Procedures

The survey of this study was conducted in the form of a three-part questionnaire:

Part 1 asks for the demographic data: genders, ages, academic year, curriculum, and majors.

Part 2 deals with satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses of TNI undergraduate students in five aspects; curriculum, teaching-learning process, teaching materials, instructors, and other (evaluation and supporting resources)

Part 3 asks for more suggestions and opinions of TNI undergraduate students.

In highlight of the aims of this investigation, the constructed English questionnaire was translated into the Thai language for clarity and readability to these TNI undergraduate students for whom English is not their first language. The Thai version of this instrument was examined by Thai teachers, who have good commands of both Thai and English, for clarity, suitability and comprehensibility to these TNI undergraduate students. Therefore, this review

by other teachers helps to further establish the content validity and reliability of the research instrument.

With respect to the administration of the student questionnaire in a Thai version, the participants were directed by their instructors of English through multimedia courses to respond to the questionnaire based upon their behavior in their English classes. Additionally, this survey was conducted at the beginning of their English through multimedia classes in 2010 academic years.

Instrumentation

The instrument used in this study is a questionnaire. The questionnaire was constructed by the researcher, based on previous research on satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses. This research questionnaire was used to identify satisfaction of the undergraduate students at Thai-Nichi Institute of Technology for their English through multimedia courses. In addition, this questionnaire was employed as a research instrument for data collection based on an ordinal-scale measurement of the students' perceived satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses.

The first part (Part 1) of this questionnaire asks for the demographic information on their genders, ages, academic year, curriculum, and majors.

Part 2 deals with satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses of TNI undergraduate students.

The participants were asked to report their information by ticking in only one box. The second part (Part 2) concerns the participants' satisfaction with

method of teaching-learning activities based on learner-centered techniques in English through multimedia courses for their study in their English courses. This part comprises 35 items of satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses in 5 major areas: seven items of curriculum, seven items of teaching-learning process, seven items of teaching materials, seven items of instructors, and seven items of others (evaluation and supporting resources). The participants were asked to tick only one box under the five levels of importance on each item in Part 2 to indicate their satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses in each area listed in the questionnaire.

The five levels of satisfaction used in the questionnaire are “Strongly Agree”, “Agree”, “Neither agree nor disagree”, “Disagree”, and “Strongly Disagree”. Responses from the student questionnaires were subsequently coded. The data of the students’ coded responses were statistically calculated and analyzed. The computation of Cronbach’s Alpha as a measure of reliability was employed to indicate how reliable the research questionnaire results are. Reliability is defined as the proportion of the students’ responses to each item in the questionnaire and the reliability coefficient or calculated alpha is a lower bound of the true reliability of the research instrument, or the questionnaire. That is, the responses to a reliable questionnaire will differ because the respondents have different perceptions on their satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses in the questionnaire, not because the questionnaire is confusing or has multiple interpretations (SPSS Base 17.0 Application Guide, 1999). The descriptive statistics is also used to determine the individual summary statistics for each of the 35 items in the questionnaire.

The third part (part 3**)** asks for more suggestions and opinions of TNI undergraduate students about satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses which based on opened end questions.

Data Collection

Satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses of the TNI undergraduate students was accessed through the questionnaire during first and second semester of 2010 academic year.

The administration of the research questionnaire was conducted in their English classes. Part 1 concerns the demographic variables about their genders, ages, academic year, curriculum, and majors. The 35 items of Part 2 cover satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses in five components; curriculum, teaching-learning process, teaching materials, instructors, and other (evaluation and supporting resources). Therefore, the participants were requested to consider each item carefully based upon their own satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses and indicate how important each item was for their study. The data collection of the students' responses, thus, deals with satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses. A total of 128 TNI students from the six majors completed the questionnaires. The students' responses from the questionnaires were subsequently coded using SPSS 17.0 for Windows as follows: "1 = male and 2 = female" for genders; "1=19 years, 2=20 years, 3=21 years, 4=22 years" for ages; "1= first year student, 2 = second year student, 3 = third year student, 4= fourth year student for level of academic year; "1=4 years program, 2=continuing program; "1 = Automotive

Engineering, 2 = Production Engineering, 3= Computer Engineering, 4= Information Technology, , 5= Industrial Management, 6= Business Japanese for major of studying in TNI; and “1 = strongly disagree, 2= disagree, 3=neither nor disagree, 4=agree, 5=strongly agree” for each of the five levels of importance on 35 items in Part 2.

The analyses of the research data were conducted by means of descriptive statistics. The descriptive statistical analyses of the frequencies and percentages of the students’ responses were employed to report their demographic variables and to indicate the rank order of the items in each area of their satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses listed in the questionnaire. The frequency distributions were analyzed to determine the proportions of the students’ responses to the five levels of importance on the 35 items of satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses in 5 major areas: curriculum, teaching-learning process, teaching materials, instructors, and other (evaluation and supporting resources). Descriptive analysis was conducted with the second research question in determining the associations of the participants’ satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses to each of these demographic variables: genders, ages, academic year, curriculum, and majors.

Data Analysis

The researcher created satisfaction questionnaire in order to investigate satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses from sampling students as 1) to study the outline of constructing questionnaire both closed-end and opened-end based on Best (1981: 168-183). The questionnaire was separated into five rating scales as demonstrated by Likert (cited Best 1981: 181). The rating scales in questionnaire were

5 refers to strongly agree
4 refers to agree
3 refers to moderate
2 refers to disagree
1 refers to strongly disagree

There were five components of satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses. The data from the experts was applied with formula as follows.

$$IOC = \frac{\Sigma R}{N}$$

IOC replaces Index of item-Objective Congruence

R replaces Experts' opinions
N replaces Number of experts

The result of the scores under 0.5 from the experts had to be considered and improved. The data obtained from small group participant was analyzed to

find reliability by using α-Coefficient formula stated by Cronbach (1974: 161). Coefficient of reliability was 0.91

Data analysis from questionnaire both single item and whole questionnaire which presented a form of rating scale. These rating scales were calculated to find out mean and standard deviation and then translated based on criteria developed by Best (1981) as follows.

$1.00 \leq \bar{x} < 1.50$ refers students had the lowest satisfaction

$1.50 \leq \bar{x} < 2.50$ refers students had low satisfaction

$2.50 \leq \bar{x} < 3.50$ refers students had moderate satisfaction

$3.50 \leq \bar{x} < 4.50$ refers students had high satisfaction

$4.50 \leq \bar{x} \leq 5.00$ refers students had the highest satisfaction

Statistic Used in Data Analysis

1. Descriptive Statistic
   - 1.1 Frequency
   - 1.2 Percentage
   - 1.3 Mean
   - 1.4 Standard Deviation
2. Statistic was used in checking questionnaire quality
   - 2.1 t-test was used in testing reliability of questionnaire
   - 2.2 Alpha Coefficient (Cronbach. 1974: 169)

CHAPTER FOUR

RESULTS OF RESEARCH

The purposes of this study were to assess satisfaction in learning English through multimedia course which taught by learner centered technique of Thai-Nichi Institute of Technology students in 5 aspects; curriculum, teaching-learning process, teaching materials, instructors, and others (evaluation and supporting resource) and to gather opinions and suggestions of Thai-Nichi Institute of Technology students towards the teaching-learning activities based on learner centered technique in English through multimedia course. The results of the data analysis and meanings of data are presented as following:

Signals used in data analysis

In data analysis, the researcher presents the signals used in data analysis as follows.

N	replaces	Number of sampling TNI undergraduate students
$\bar{x}$	replaces	Mean
S.D.	replaces	Standard Deviation

Presentation of results of data analysis

In order to present the results of data analysis, the three phases were presented as following;

Phase 1: The results of demographic variables of TNI undergraduate students.

Phase 2: The results of satisfaction in learning English through multimedia course which taught by learner centered technique of Thai-Nichi Institute of Technology students.

Phase 3: The results of study opinions and suggestions of TNI undergraduate students in five components; curriculum, teaching-learning process, teaching materials, instructors, and others (evaluation and supporting resource). Frequency and content analysis are presented in this phase.

Results of Data Analysis

Phase 1: The results of demographic variables of TNI undergraduate students.

The analysis of the data from the student questionnaire reported by TNI undergraduate students in the 2010 academic year is presented in the first section deals with the demographic variables from the students' responses to Part 1 of the questionnaire: genders, ages, academic year of studying, curriculum, and majors as following table.

Table 4: Table of the results of demographic data of respondents

Demographic data of respondents	N	Percentage
1. Gender		
1.1 male	89	74.56
1.2 female	39	25.44
Total	**128**	**100**
2. Age		
2.1 19 years	11	8.59
2.2 20 years	22	17.18
2.3 21 years	65	50.78
2.4 22 years	30	23.43
Total	**128**	**100**
3. Level of Academic Year		
1.1 First year	0	0
3.2 Second year	42	32.81
3.3 Third year	55	42.96
3.4 Fourth year	31	24.21
Total		**100**
4. Curriculum		
4.1 4 years program	128	100
4.2 Continuing program	0	0
Total	**128**	**100**
5. Majors		
5.1 Automotive Engineering	5	3.90
5.2 Production Engineering	17	13.28
5.3 Computer Engineering	20	15.62
5.4 Information Technology	61	47.65
5.5 Industrial Management	11	8.59
5.6 Business Japanese	14	10.93
Total	**128**	**100**

Table showed that the percentages of the TNI undergraduate respondents in genders ranged from 74.56 % for male and 25.44% for female; in ages ranged from 8.59% for 19 years old, 17.18% for 20 years old, 50.78% for 21 years old, and 23.43% for 22 years old; in academic year ranged from 32.81% for second year, 42.96% for third year, 24.21% for fourth year; in curriculum ranged from 100% for four years program and 0% for continuing program; in majors ranged from 3.90% for Automotive Engineering, 13.28% for Productive Engineering, 15.62% for Computer Engineering, 47.65% for Information Technology, 8.59% for Industrial Management, and 10.93% for Business Japanese.

Phase 2: The results of satisfaction in learning English through multimedia course which taught by learner centered technique of Thai-Nichi Institute of Technology students

Table 5: Table of satisfaction in learning English through multimedia course which taught by learner centered technique of Thai-Nichi Institute of Technology students in each aspect and in total

Components	N	$\bar{x}$	S.D.	Level
1. Curriculum	128	4.23	0.65	high
2. Teaching-learning process	128	4.42	0.54	high
3. Teaching materials	128	4.21	0.77	high
4. Instructors	128	4.56	0.45	Very high
5. others (evaluation and supporting resource)	128	3.88	0.84	moderate
Total	**128**	**4.26**	**0.65**	**high**

The table above indicated that TNI students had satisfaction in learning English through multimedia course which taught by learner centered techniques at high level ($\bar{x}$= 4.26) when considered in each aspect. It found that satisfaction in curriculum at high level ($\bar{x}$= 4.23), in teaching-learning process at high level ($\bar{x}$= 4.42), in teaching materials at high level ($\bar{x}$= 4.21), in instructors at very high level ($\bar{x}$= 4.56), and in others (evaluation and supporting resources) at moderate level ($\bar{x}$= 3.88).

Table 6: Table of mean, percentage, standard deviation of satisfaction in learning English through multimedia course which taught by learner centered technique of Thai-Nichi Institute of Technology students in Curriculum

NO.	Satisfaction in Curriculum	N	%	$\bar{x}$	S.D.	Level
1	English textbooks are suitable to level of learners	128	100	4.11	0.79	high
2	Contents of textbooks are arranged from basic to advance	128	100	4.19	0.68	high
3	Contents of English textbooks are suitable to practice and application	128	100	4.12	0.71	high
4	Schedule of time management in learning are suitable	128	100	4.31	0.65	high
5	Learners can apply instruction in daily life	128	100	4.34	0.54	high
6	3 hours per week are suitable	128	100	4.25	0.63	high
7	Curriculum are employed in learner-centered style	128	100	4.32	0.60	high
	Total			**4.23**	**0.65**	high

The table revealed that satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses in curriculum aspect of TNI students was high level ($\bar{x}$ =4.23) which rank order of the highest satisfaction was item 5 *Learners can apply instruction in daily life* (($\bar{x}$ = 4.34), item 7 *Curriculum are employed in learner-centered style* ($\bar{x}$ =4.32), item 4 *Schedule of time management in learning are suitable* ($\bar{x}$ =4.31) and the lowest satisfaction was item 1 *English textbooks are suitable to level of learners* ($\bar{x}$ =4.11), and item 3 *Contents of English textbooks are suitable to practice and application* ($\bar{x}$ =4.12).

Table 7: Table of mean, percentage, standard deviation of satisfaction in learning English through multimedia course which taught by learner centered technique of Thai-Nichi Institute of Technology students in Teaching-learning process

NO.	Satisfaction in Teaching-Learning Process	N	%	$\bar{x}$	S.D.	Level
1	Supplementary materials are applied in the classroom	128	100	4.39	0.59	high
2	Learning by doing is taught in classroom	128	100	4.52	0.53	**very high**
3	Learner-centered techniques are employed in the classroom	128	100	4.38	0.61	high
4	Listening and speaking classes are taught by foreign teachers every week	128	100	4.48	0.49	high
5	Self-study is applied in and outside the classroom	128	100	4.39	0.59	high
6	Summative test is used in each unit	128	100	4.37	0.52	high
7	Criteria of evaluation is suitable	128	100	4.44	0.46	high
	Total			4.42	0.54	high

The table revealed that satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses in teaching-learning process of TNI students was high level ($\bar{x}$ =4.42) which rank order of the highest satisfaction was item 2 *Learning by doing is taught in classroom* ($\bar{x}$ = 4.52), item 4 *Listening and speaking classes are taught by foreign teachers every week* ($\bar{x}$ =4.48) and the lowest satisfaction was item 6 *Summative test is used in each unit* ($\bar{x}$ =4.37), item 5 *Self-study is applied in and outside the classroom* ($\bar{x}$ =4.39), and item 1 *Supplementary materials are applied in the classroom*($\bar{x}$ =4.39).

Table 8: Table of mean, percentage, standard deviation of satisfaction in learning English through multimedia course which taught by learner centered technique of Thai-Nichi Institute of Technology students in Teaching Material

NO.	Satisfaction in Teaching Material	N	%	$\bar{x}$	S.D.	Level
1	English songs are applied to motivate EFL learners in the class	128	100	4.28	0.71	high
2	Multimedia materials are used in the classroom	128	100	4.17	0.79	high
3	Sound lab room is provided for learners appropriately	128	100	4.22	0.82	high
4	Teaching materials on the internet is employed in the classroom to enhance reading and listening skills	128	100	4.13	0.89	high
5	Computer-Assisted Language Learning is applied in the class	128	100	4.25	0.69	high
6	Cooperative learning, problem solving, questioning, and small group discussion are integrated in activity of each unit	128	100	4.21	0.72	high
7	Supplementary materials are suitable to learners	128	100	4.24	0.78	high
	Total			4.21	0.77	high

The table revealed that satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses in teaching materials of TNI students was high level ($\bar{x}$ =4.21) which rank order of the highest satisfaction was item 1 *English songs are applied to motivate EFL learners in the class* ($\bar{x}$ = 4.28), item 5 *Computer-Assisted Language Learning is applied in the class* ($\bar{x}$ =4.25) and the lowest satisfaction was item 4 *Teaching materials on the internet is employed in the classroom to enhance reading and listening skills* ($\bar{x}$ =4.13), and item 2 *Multimedia materials are used in the classroom* ($\bar{x}$ =4.17).

Table 9: Table of mean, percentage, standard deviation of satisfaction in learning English through multimedia course which taught by learner centered technique of Thai-Nichi Institute of Technology students in Instructors

NO.	Satisfaction in Instructors	N	%	$\bar{x}$	S.D.	Level
1	Instructors make learning environment to support good environment in the classroom	128	100	4.63	0.41	**very high**
2	Instructors are good idols in learning English to learners	128	100	4.60	0.40	**very high**
3	New contents are inserted by instructors to motivate learners in English learning	128	100	4.45	0.54	high
4	Instructors develop and apply new knowledge to learners	128	100	4.56	0.48	**very high**
5	Instructors give opportunity to learners to ask questions both in class and outside class.	128	100	4.58	0.46	**very high**
6	Instructors explain the importance and goals in learning English language to learners	128	100	4.49	0.51	high
7	Instructors have techniques and excellent skills in teaching English	128	100	4.61	0.41	**very high**
	Total			4.56	0.45	**very high**

The table revealed that satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses in instructors aspect of TNI students was very high level ($\bar{x}$ =4.56) which rank order of the highest satisfaction was item 1 *Instructors make learning environment to support good environment in the classroom* ($\bar{x}$ = 4.63), item 7 *Instructors have techniques and excellent skills in teaching English* ($\bar{x}$ =4.61) and the lowest satisfaction was item 3 *New contents are inserted by instructors to motivate learners in English learning* ($\bar{x}$ =4.45), and item 6 *Instructors explain the importance and goals in learning English language to learners* ($\bar{x}$ =4.49).

Table 10: Table of mean, percentage, standard deviation of satisfaction in learning English through multimedia course which taught by learner centered technique of Thai-Nichi Institute of Technology students in others (evaluation and supporting resources)

NO.	Satisfaction in Others (evaluation and supporting resources)	N	%	$\bar{x}$	S.D.	Level
1	Evaluation of results of examination is suitable	128	100	4.02	0.77	
2	Evaluation of results of self-learning activity is suitable	128	100	3.79	0.89	
3	Evaluation of both practicing and theory part is suitable	128	100	3.99	0.87	
4	Wi-Fi internet provided both in classroom and outside the classroom is suitable	128	100	4.14	0.68	
5	Computers in the classroom are modern and suitable for learners	128	100	3.12	0.98	
6	Classroom environment is suitable	128	100	4.05	0.87	
7	Textbooks and referenced books are provided in library appropriately	128	100	4.07	0.83	
	Total			3.88	0.84	

The table revealed that satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses in others (evaluation and supporting resources) of TNI students was high level ($\bar{x}$ =3.88) which rank order of the highest satisfaction was item 4 *Wi-Fi internet provided both in classroom and outside the classroom is suitable* ($\bar{x}$ = 4.14), item 7 *Textbooks and referenced books are provided in library appropriately* ($\bar{x}$ =4.07) and the lowest satisfaction was item 5 *Computers in the classroom are modern and suitable for learners* ($\bar{x}$ =3.12), and item 2 *Evaluation of results of self-learning activity is suitable* ($\bar{x}$ =3.79).

Phase 3: The results of study opinions and suggestions of TNI undergraduate students in five components; curriculum, teaching-learning process, teaching materials, instructors, and others (evaluation and supporting resource). Frequency and content analysis are presented in this phase.

Table 11: Table of frequency and percentage of number of opinions and suggestions of TNI undergraduate students in five components namely; curriculum, teaching-learning process, teaching materials, instructors, and others (evaluation and supporting resource)

Opinions and suggestions in learning English of TNI students	**No.**	**Fre**	**%**
Curriculum	**50**		
Opinions	37		74
1. Contents in the textbook are suitable		27	54
2. Contents in curriculum can be used in daily life especially in listening and speaking skill		10	20
Suggestions	13		26
1. The curriculum in various dimensions should be organized and		5	10
2. The curriculum should be managed flexibly to learners' needs.		4	8
3. The supplementary materials should be done for enhance proficiency in instructions		4	8
Teaching –learning process	**72**		
Opinions	46		63.88
1. Teaching –learning management is suitable		38	52.77
2. Pedagogical method is good and completes in all aspects		8	11.11
Suggestions	26		36.12
1. Contents of lessons should be taught in order to lesson plans in course outline.		19	26.38
2.Learning in sound lab room should be provided more in instruction		7	9.72

Opinions and suggestions in learning English of TNI students	No.	Fre	%
Instructors and teaching materials	**73**		
Opinions	63		86.30
1. Teachers are kind and fun		24	32.87
2. Thai teachers are friendly to students		20	27.39
3. Teachers provide good materials and exercises for students		19	26.02
Suggestions	10		13.70
1. New computer and modern equipments should be provided in the classroom.		8	10.95
2. Instrument and materials in teaching should be provided in self-access learning style		2	2.74
Others (evaluation and supporting resources)	58		
Opinions	26		44.83
1. Students need to have evaluation every unit		14	24.14
2. Students require modern computers in every classroom		12	20.69
Suggestions	32		55.17
1. Teachers should let students show in front of the class frequently		13	22.41
2. Internet should be brought in teaching		11	18.96
3. Textbooks should be easier to be appropriate with level of learners.		8	13.79

The table showed that TNI undergraduate students had opinions and suggestions in five components namely; curriculum, teaching-learning process, teaching materials, instructors, and others (evaluation and supporting resource) as following.

1. In curriculum, it revealed that the answers of 50 students were divided into 2 categories which were opinions and suggestions; 37 students (74%) and 13 students (26%) respectively. *Contents in the textbook are suitable* was equal to 54% (27 students); *Contents in curriculum can be used in daily life especially in listening and speaking skill* was equal to 20% (10 students).

Suggestions from 13 students (26%) answered that *The curriculum in various dimensions should be organized* was equal to 10% (5 students); *The curriculum should be managed flexibly to learners' needs* was equal to 8% (4 students); *New English article should be taught regularly* was equal to 3.90% (8 students); and *The supplementary materials should be done for enhance proficiency in instructions* was equal to 8% (4 students).

2. In teaching-learning process, it revealed that the answers of 72 students were divided into 2 categories which were opinions and suggestions; 46 students (63.88%) and 26 students (36.12%) respectively. *Teaching –learning management is suitable* was equal to 52.77% (38 students); and *Pedagogical method is good and completes in all aspects* was equal to 11.11% (8 students).

Suggestions from 26 students (36.12%) answered that *Contents of lessons should be taught in order to lesson plans in course outline* was equal to 26.38% (19 students); and *Learning in sound lab room should be provided more in instruction* was equal to 9.72% (7 students).

3. In teaching materials and instructors, it revealed that the answers of 73 students were divided into 2 categories which were opinions and suggestions; 63 students (86.30%) and 10 students (13.70%) respectively. *Teachers are kind and fun* to 32.87% (24 students); *Thai teachers are friendly to students* was equal to 27.39% (20 students); and *Teachers provide good materials and exercises for students* was equal to 26.02% (19 students).

Suggestions from 10 students (13.70%) answered that *New computer and modern equipments should be provided in the classroom* was equal to 10.95% (8 students); and *Instrument and materials in teaching should be provided in self-access learning style* was equal to 2.74% (2 students).

4. In others (evaluation and supporting resources), it revealed that the answers of 58 students were divided into 2 categories which were opinions and suggestions; 26 students (44.83%) and 32 students (55.17%) respectively. *Students need to have evaluation every unit* to 24.14% (14 students); and

Students require modern computers in every classroom was equal to 20.69% (12 students).

Suggestions from 32 students (55.17%) answered that *Teachers should let students show in front of the class frequently* was equal to 22.41% (13 students); *Internet should be brought in teaching* was equal to 18.96% (11 students); and *Textbooks should be easier to be appropriate with level of learners* was equal to 13.79% (8 students).

CHAPTER FIVE

CONCLUSION, DISCUSSION, RECOMMENDATION

The first part of this chapter summarizes the research objectives, research questions, the methodology, and the analysis of the data, followed by the conclusions and discussion of the research findings in the second and third part. The recommendations and implications in relation to the research findings are also discussed. The final part deals with suggestions for applications and future research.

Research Objectives

1) To assess satisfaction in learning English through multimedia course by using learner centered technique of Thai-Nichi Institute of Technology students in 5 aspects; curriculum, teaching-learning process, teaching materials, instructors, and others (evaluation and supporting resource)

2) To gather opinions and suggestions from Thai-Nichi Institute of Technology students in term of the teaching-learning activities based on learner centered technique in English through multimedia course.

Research Questions:

1) What satisfaction level in learning English through multimedia course which taught by learner centered technique do Thai-Nichi Institute of Technology students have?

2) How do Thai-Nichi Institute of Technology students have opinions and suggestions about learning English through multimedia course which taught by learner centered technique?

Scope of the study

A. Population and Sample

This research was survey method in satisfaction in learning English of Thai-Nichi Institute of Technology which consisted of population and sampling as follows:

Populations of this research were 150 TNI students in 3 faculties namely faculty of Business Administration, Faculty of Engineering, and Faculty of Information Technology in 2010 academic year which derived from enrollment in English through multimedia course.

Samples of this research were 128 TNI students derived through Simple Random Sampling technique.

B. Variable

Variable in study is satisfaction in learning English through multimedia course of TNI students.

Participants

The participants in this study were 128 undergraduate students at Thai-Nichi Institute of Technology in Thailand. These students were enrolled in English through multimedia course (ENL-411) during the first semester and second semester of the 2010 academic year. They were studying in six specific fields of business and technical areas: Automotive Engineering, Production Engineering, Computer Engineering, Industrial Management, Business Japanese, and Information Technology.

During the academic year of 2010, these TNI students had enrolled in a English through multimedia course (ENL-411) which is elective subject of English Department, College of General Education and Languages, Thai-Nichi Institute of Technology.

Instrumentation

The instrument used in this study is a questionnaire. The questionnaire was constructed by the researcher, based on previous research on satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses. This research questionnaire was used to identify satisfaction of the undergraduate students at Thai-Nichi Institute of Technology for their English through multimedia courses. In addition, this questionnaire was employed as a research instrument for data collection based on an ordinal-scale measurement of the students' perceived satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses.

The first part (Part 1) of this questionnaire asks for the demographic information on their genders, ages, academic year, curriculum, and majors.

Part 2 deals with satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses of TNI undergraduate students.

The participants were asked to report their information by ticking in only one box. The second part (Part 2) concerns the participants' satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses for their study in their English courses. This part comprises 35 items of satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia

courses in 5 major areas: seven items of curriculum, seven items of teaching-learning process, seven items of teaching materials, seven items of instructors, and seven items of others (evaluation and supporting resources). The participants were asked to tick only one box under the five levels of importance on each item in Part 2 to indicate their satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses in each area listed in the questionnaire.

The five levels of satisfaction used in the questionnaire are “Strongly Agree”, “Agree”, “Neither agree nor disagree”, “Disagree”, and “Strongly Disagree”. Responses from the student questionnaires were subsequently coded. The data of the students’ coded responses were statistically calculated and analyzed. The computation of Cronbach’s Alpha as a measure of reliability was employed to indicate how reliable the research questionnaire results are. Reliability is defined as the proportion of the students’ responses to each item in the questionnaire and the reliability coefficient or calculated alpha is a lower bound of the true reliability of the research instrument, or the questionnaire. That is, the responses to a reliable questionnaire will differ because the respondents have different perceptions on their satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses in the questionnaire, not because the questionnaire is confusing or has multiple interpretations (SPSS Base 17.0 Application Guide, 1999). The descriptive statistics is also used to determine the individual summary statistics for each of the 35 items in the questionnaire.

The third part (part 3) asks for more suggestions and opinions of TNI undergraduate students about satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses which based on opened end questions.

Data Collection

Satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses of the TNI undergraduate students was accessed through the questionnaire during first and second semester of 2010 academic year.

The administration of the research questionnaire was conducted in their English classes. Part 1 concerns the demographic variables about their genders, ages, academic year, curriculum, and majors. The 35 items of Part 2 cover satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses in five components; curriculum, teaching-learning process, teaching materials, instructors, and other (evaluation and supporting resources). Therefore, the participants were requested to consider each item carefully based upon their own satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses and indicate how important each item was for their study. The data collection of the students' responses, thus, deals with satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses. A total of 128 TNI students from the six majors completed the questionnaires. The students' responses from the questionnaires were subsequently coded using SPSS 17.0 for Windows as follows: "1 = male and 2 = female" for genders; "1=19 years, 2=20 years, 3=21 years, 4=22 years" for ages; "1= first year student, 2 = second year student, 3 = third year student, 4= fourth year student for level of academic year; "1=4 years program, 2=continuing program; "1 = Automotive Engineering, 2 = Production Engineering, 3= Computer Engineering, 4= Information Technology, , 5= Industrial Management, 6= Business Japanese for major of studying in TNI; and "1 = strongly disagree, 2= disagree, 3=neither nor disagree, 4=agree, 5=strongly agree" for each of the five levels of importance on 35 items in Part 2.

The analyses of the research data were conducted by means of descriptive statistics. The descriptive statistical analyses of the frequencies and percentages of the students' responses were employed to report their demographic variables and to indicate the rank order of the items in each area of their satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses listed in the questionnaire. The frequency distributions were analyzed to determine the proportions of the students' responses to the five levels of importance on the 35 items of satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses in 5 major areas: curriculum, teaching-learning process, teaching materials, instructors, and other (evaluation and supporting resources). Descriptive analysis was conducted with the second research question in determining the associations of the participants' satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses to each of these demographic variables: genders, ages, academic year, curriculum, and majors.

Data Analysis

The researcher created satisfaction questionnaire in order to investigate satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses from sampling students as 1) to study the outline of constructing questionnaire both closed-end and opened-end based on Best (1981: 168-183). The questionnaire was separated into five rating scales as demonstrated by Likert (cited Best 1981: 181). The rating scales in questionnaire were

5	refers to	strongly agree
4	refers to	agree
3	refers to	moderate
2	refers to	disagree
1	refers to	strongly disagree

There were five components of satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses. The data from the experts was applied with formula as follows.

$$IOC = \frac{\Sigma R}{N}$$

IOC replaces Index of item-Objective Congruence

R replaces Experts' opinions

N replaces Number of experts

The result of the scores under 0.5 from the experts had to be considered and improved. The data obtained from small group participant was analyzed to find reliability by using α-Coefficient formula stated by Cronbach (1974: 161). Coefficient of reliability was 0.91

Data analysis from questionnaire both single item and whole questionnaire which presented a form of rating scale. These rating scales were calculated to find out mean and standard deviation and then translated based on criteria developed by Best (1981) as follows.

$1.00 \leq \bar{x} < 1.50$ refers students had the lowest satisfaction

$1.50 \leq \bar{x} < 2.50$ refers students had low satisfaction

$2.50 \leq \bar{x} < 3.50$ refers students had moderate satisfaction

$3.50 \leq \bar{x} < 4.50$ refers students had high satisfaction

$4.50 \leq \bar{x} \leq 5.00$ refers students had the highest satisfaction

Conclusions

According to the study and data analysis, the results of this study were concluded as follows.

Phase 1: The results of demographic variables of TNI undergraduate students.

The analysis of the data from the student questionnaire reported by TNI undergraduate students in the 2010 academic year is presented in the first section deals with the demographic variables from the students' responses to Part 1 of the questionnaire: genders, ages, academic year of studying, curriculum, and majors.

As shown in the table, percentages of the TNI undergraduate respondents in genders ranged from 74.56 % for male and 25.44% for female; in ages ranged from 8.59% for 19 years old, 17.18% for 20 years old, 50.78% for 21 years old, and 23.43% for 22 years old; in academic year ranged from 32.81% for second year, 42.96% for third year, 24.21% for fourth year; in curriculum ranged from 100% for four years program and 0% for continuing program; in majors ranged from 3.90% for Automotive Engineering, 13.28% for Productive Engineering, 15.62% for Computer Engineering, 47.65% for Information Technology, 8.59% for Industrial Management, and 10.93% for Business Japanese.

Phase 2: The results of satisfaction in learning English through multimedia course which taught by learner centered technique of Thai-Nichi Institute of Technology students

TNI students had satisfaction in learning English through multimedia course which taught by learner centered techniques at high level ($\bar{x}$= 4.26) when considered in each aspect. It found that satisfaction in curriculum at high level ($\bar{x}$= 4.23), in teaching-learning process at high level ($\bar{x}$= 4.42), in teaching

materials at high level ($\bar{x}$= 4.21), in instructors at very high level ($\bar{x}$= 4.56), and in others (evaluation and supporting resources) at moderate level ($\bar{x}$= 3.88).

Phase 3: The results of study opinions and suggestions of TNI undergraduate students in five components; curriculum, teaching-learning process, teaching materials, instructors, and others (evaluation and supporting resource). Frequency and content analysis are presented in this phase.

TNI undergraduate students had opinions and suggestions in five components namely; curriculum, teaching-learning process, teaching materials, instructors, and others (evaluation and supporting resource) as following.

1. In curriculum, it revealed that the answers of 50 students were divided into 2 categories which were opinions and suggestions; 37 students (74%) and 13 students (26%) respectively. *Contents in the textbook are suitable* was equal to 54% (27 students); *Contents in curriculum can be used in daily life especially in listening and speaking skill* was equal to 20% (10 students).

Suggestions from 13 students (26%) answered that *The curriculum in various dimensions should be organized* was equal to 10% (5 students); *The curriculum should be managed flexibly to learners' needs* was equal to 8% (4 students); *New English article should be taught regularly* was equal to 3.90% (8 students); and *The supplementary materials should be done for enhance proficiency in instructions* was equal to 8% (4 students).

2. In teaching-learning process, it revealed that the answers of 72 students were divided into 2 categories which were opinions and suggestions; 46 students (63.88%) and 26 students (36.12%) respectively. *Teaching –learning management is suitable* was equal to 52.77% (38 students); and *Pedagogical method is good and completes in all aspects* was equal to 11.11% (8 students).

Suggestions from 26 students (36.12%) answered that *Contents of lessons should be taught in order to lesson plans in course outline* was equal to 26.38%

(19 students); and *Learning in sound lab room should be provided more in instruction* was equal to 9.72% (7 students).

3. In teaching materials and instructors, it revealed that the answers of 73 students were divided into 2 categories which were opinions and suggestions; 63 students (86.30%) and 10 students (13.70%) respectively. *Teachers are kind and fun* to 32.87% (24 students); *Thai teachers are friendly to students* was equal to 27.39% (20 students); and *Teachers provide good materials and exercises for students* was equal to 26.02% (19 students).

Suggestions from 10 students (13.70%) answered that *New computer and modern equipments should be provided in the classroom* was equal to 10.95% (8 students); and *Instrument and materials in teaching should be provided in self-access learning style* was equal to 2.74% (2 students).

4. In others (evaluation and supporting resources), it revealed that the answers of 58 students were divided into 2 categories which were opinions and suggestions; 26 students (44.83%) and 32 students (55.17%) respectively. *Students need to have evaluation every unit* to 24.14% (14 students); and *Students require modern computers in every classroom* was equal to 20.69% (12 students).

Suggestions from 32 students (55.17%) answered that *Teachers should let students show in front of the class frequently* was equal to 22.41% (13 students); *Internet should be brought in teaching* was equal to 18.96% (11 students); and *Textbooks should be easier to be appropriate with level of learners* was equal to 13.79% (8 students).

Discussions

According to the study and data analysis, the results of this study could be discussed as follows.

The results of this research showed that satisfaction in learning English through multimedia by using teaching-learning activities based on learner centered technique of TNI students was at high level. When considered in each aspect, it was found that their satisfaction were at high level on curriculum, teaching materials, teaching-learning process, and instructors, while their satisfaction in others (evaluation and supporting resource) was at a moderate level.

1. Satisfaction in Curriculum ($\bar{x}$=4.23) was because contents of English subject cover all skills and support students in learning about language focus, sociolinguistics, syntax, and communicative strategies (Nunan, 1988: 5). Moreover, contents of English through multimedia course are important to learners' interesting and needs. Therefore, effective learning process of individuals was dependant on 2 significant factors: learning environment and learning situation (McCombs, 2000: 15). Learner centered teaching demands active learning environments, guides learners to learn how to learn, recognizes differences in each learner, and creates different learning styles to meet the needs of each learner (Huba and Freed 2000: 5).

2. Satisfaction in Teaching-learning process ($\bar{x}$=4.42) was because the TNI students were satisfied with activities or tasks in teaching-learning process because instructors focused on cognitive tasks indicated the procedural and declarative knowledge enabling strengthened through practice (Krashen, 1987).

3. Satisfaction in Teaching materials ($\bar{x}$=4.21) was because College of General Education and Languages of TNI provided updated teaching materials for all students and the various multimedia materials were prepared for TNI students in practice listening skill and chatting with foreign teachers. Teachers

emphasized atmosphere in the classroom in English and provided the interesting topics to motivate all students in learning English. The students were taught happily (Nunan, 1988: 22).

4. Satisfaction in Instructors ($\bar{x}$=4.56) was because the teachers emphasized on the learner-centered approach and understood learning psychology of learners. The instructors were aware of the method to motivate the learners to learn as well as encourage the learners to respond the needs to learn English subject. An effective learning process of individuals was dependant on 2 significant factors: learning environment and learning situation (Gagne and others 1988: 14). Moreover, the result of high satisfaction towards the instructors was because learners had the benefit of learning English, as second language, with both Thai and foreign teachers. The learners got used to practicing their English naturally in a form daily life speaking. This strategy supported the learners to learn English by coincidence because they emphasized on speaking for communication rather than rules of English language. Thus, the learners did not feel that they were learning English subject. However, the learners were able to be aware of the wrong use of English (Krashen 1987: 35-40). In addition, the role of instructors has shifted from transmitting knowledge to the new role of facilitating, guiding, or coaching. As a facilitator, the instructors incorporate and provide rich environments and learning experiences for collaborative learning (Sharp, 2006:12). Thus, the learning environment is more learner-centered as students are encouraged to construct meaning from their experiences in order to apply with the content (Huba & Freed, 2002).

5. Satisfaction in other aspects (evaluation and supporting resource) ($\bar{x}$=3.88) were because the learners need new equipments and modern computers in the classroom to help their learning. Thus, the results were shown as a moderate level because evaluation and supporting resource were outdated so the learner centered approach emphasizes positive learning climate in every

class and Teachers work as the facilitators of learning (Penkhae Prachonpachanuk, 2009; Ministry of Education, 2003; Huba & Freed, 2000).

Recommendations

According to the study, the useful suggestions for further development and improvement were demonstrated as follows.

1. Recommendation for this study

1.1 From the results of the study found that TNI undergraduate students had satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses in high level. Therefore, TNI administrators should support modern supplementary materials in the library and in the classroom.

1.2 The results of the study from opinions and suggestions were presented as students need to have evaluation every unit and they require modern computers in every classroom. Hence, TNI instructors should provide sub-test in the class for each unit and administrators should support modern computer in the classrooms.

1.3 From the opinions of students were presented as students require learning in sound lab rooms. Therefore, instructor should provide more in instruction.

2. Recommendation for further study

2.1 A survey of satisfaction with method of teaching-learning activities based on learner-centered techniques should be proposed for other courses.

2.2 Comparisons of satisfaction with method of teaching-learning activities based on learner-centered techniques of TNI undergraduate students should be tested in the other courses.

2.3 A survey of satisfaction with method of teaching-learning activities based on learner-centered techniques of students in opinions of teachers should be studied.

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Appendix

Appendix A

Satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses questionnaire

Satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses questionnaire

Directions:

✪ *This questionnaire is composed of 3 parts: PART A is about yourself, PART B consists of 85 items to elicit your Satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses regarding five main areas: curriculum, teaching-learning process, teaching materials, instructors, and others (evaluation and supporting resource) and PART C consists of opinions and supplementary suggestions.*

✪ *Please put the information on questionnaire in real situation and thank you for your cooperation.*

Part A: Personal data of TNI students

✪ Please mark the symbol ✓ in the box ☐ in real situation and real information

1. Gender ☐ Male ☐ Female

2. Age ☐ 19 years ☐ 20 years ☐ 21 years ☐ 22 years

3. Curriculum ☐ 4 years ☐ Continuing program

4. Academic year ☐ First year ☐ Second year ☐ Third year ☐ Fourth year

5. Major
☐ Automotive Engineering
☐ Production Engineering
☐ Computer Engineering
☐ Information Technology
☐ Industrial Management
☐ Business Japanese

Part B: Satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses of TNI students

5 = strongly agree
4 = agree
3 = neither agree nor disagree
2 = disagree
1 = strongly disagree

✪ Please mark the symbol ✓ in the box ☐ in real situation and real information

No.	Statement	Level of satisfaction				
		5	4	3	2	1
	In Curriculum					
1	English textbooks are suitable to level of learners					
2	Contents of textbooks are arranged from basic to advance					
3	Contents of English textbooks are suitable to practice and application					
4	Schedule of time management in learning are suitable					
5	Learners can apply instruction in daily life					
6	3 hours per week are suitable					
7	Curriculum are employed in learner-centered style					
	In Teaching-learning process					
8	Supplementary materials are applied in the classroom					
9	Learning by doing is taught in classroom					
10	Learner-centered techniques are employed in the classroom					
11	Listening and speaking classes are taught by foreign teachers every week					
12	Self-study is applied in and outside the classroom					
13	Summative test is used in each unit					
14	Criteria of evaluation is suitable					
	Teaching materials					
15	English songs are applied to motivate EFL learners in the class					
16	Multimedia materials are used in the classroom					

No.	Statement	Level of satisfaction				
		5	4	3	2	1
17	Sound lab room is provided for learners appropriately					
18	Teaching materials on the internet is employed in the classroom to enhance reading and listening skills					
19	Computer-Assisted Language Learning is applied in the class					
20	Cooperative learning, problem solving, questioning, and small group discussion are integrated in activity of each unit					
21	Supplementary materials are suitable to learners					
	In Instructors					
22	Instructors make learning environment to support good environment in the classroom					
23	Instructors are good idols in learning English to learners					
24	New contents are inserted by instructors to motivate learners in English learning					
25	Instructors develop and apply new knowledge to learners					
26	Instructors give opportunity to learners to ask questions both in class and outside class.					
27	Instructors explain the importance and goals in learning English language to learners					
28	Instructors have techniques and excellent skills in teaching English					
	In Others (evaluation and supporting resource)					
29	Evaluation of results of examination is suitable					
30	Evaluation of results of self-learning activity is suitable					
31	Evaluation of both practicing and theory part is suitable					
32	Wifi internet provided both in classroom and outside the classroom is suitable					
33	Computers in the classroom are modern and suitable for learners					
34	Classroom environment is suitable					
35	Textbooks and referenced books are provided in library appropriately					

Part C: Opinions and Supplemental Suggestions

✪ **Please give your opinions and supplementary suggestions about your Satisfaction with method of teaching-learning activities based on learner-centered techniques in English through multimedia courses.**

1. in Curriculum

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2. in Teaching –Learning Process

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3. in Teaching Materials

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4. in Instructors

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5. in Others (evaluation and supporting resource)

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Thank you for your cooperation

Bio Data

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