Development of an Instructional Model for Online Task-Based Interactive Listening for EFL Learners

Xingbin Tian[1] & Suksan Suppasetseree[1]

[1] School of Foreign Languages, Institute of Social Technology, Suranaree University of Technology, Thailand

Correspondence: Suksan Suppasetseree, School of Foreign Languages, Institute of Social Technology, Suranaree University of Technology, Nakhon Ratchasima 30000, Thailand. Tel: 66-818-791-379. E-mail: xingbintian@yahoo.com

Abstract

College English in China has shifted from cultivating reading ability to comprehensive communicative abilities with an emphasis on listening and speaking. For this reason, new teaching models should be built on modern information technology. However, little research on developing models for the online teaching of listening skills has been conducted. Thus, the present study aims at developing an instructional model for online task-based interactive listening (OTIL Model) for English as a Foreign Language (EFL) learners and investigating the effects of using OTIL. First, researcher constructed the OTIL Model by analyzing and synthesizing four effective and manageable instructional design models. Subsequently, three experts in the field of instructional systems design and English language teaching evaluated the OTIL Model. Next, two non-English major intact classes at Tongren University, China (TU), were employed in the experiment by using OTIL designed based on the developed OTIL Model. Additionally, the results of the two classes were compared by pre- and post-tests, revealing a significant difference in the post-test score between the experimental and control classes (P=0.000, P≤0.05). The results seem to suggest that the OTIL Model can be served to promote students' listening ability.

Keywords: instructional models, online learning, listening instruction, EFL learners, China

1. Introduction

China's college English teaching has been faced with problems described as follows: 1) due to the fact of the increasing enrollments in China's universities, their limited teaching facilities have become an imperative problem in the development of college English education; 2) dumb and deaf English, referring to time-consuming and low efficiency instructional methods, are still common phenomena in college English teaching (Xu, 2006). In 2007, College English Curriculum Requirements (CECR) which is the new English curriculum for Chinese non-English major undergraduate students was issued by Ministry of Education of China (MOE), aiming to emphasize "developing students' ability to use English in an all-round way, especially in listening and speaking" (MOE, 2007, p. 18). The goal of college English has shifted from cultivating reading ability to comprehensive communicative abilities with an emphasis on listening and speaking. The CECR (MOE, 2007) claims that college English teaching in universities across China should be shifted from teacher-centered to learner-centered patterns in order to deepen and improve English teaching reform and quality. In addition, universities should follow the guidelines of the CECR and their college English teaching goals in designing their own instructional models built on modern information technology, concerning the universities' circumstances, teaching resources and students' English proficiency level. The CECR also states that universities should explore and establish a web-based listening teaching model and deliver listening courses via the intranet or campus network.

In order to meet the requirements of CECR, a great deal of research on EFL listening instruction in China (Cheng, 2009; Hong & Fu, 2011; Li, 2011; Liu, 2007; Tian & Yang, 2008; Yan, 2006; Yao, 2010) has been done on how to promote learners' listening ability. However, as far as we know, there is relatively little research on instructional models for college English teaching. For instance, Tan and Chen (Tan & Chen, 2008) constructed an instructional model for college English listening-speaking course based on VLC (Virtual Learning Community). The results show that the learning effects of VLC are significant in the course. The students' attitudes to the course learning changed towards a positive direction. Wang and Chen (2010) designed a

computer- and classroom-based multimedia college English teaching model which is an embodiment of the blended teaching idea. The model places a premium on individualized teaching and independent learning and makes full use of the special function of computers in assisting learners with repeated language practice in English listening, speaking, reading, writing and translation. However, the instructional design model was explained without an empirical study. Yao (2011) created an agent model for college English class teaching in the modern educational technology environment. She explored the optimum instructional design in term of teaching goals and contents, but she had not justified the model by doing evaluation and experiment. To fill in the research gap, the purposes of this study aimed to develop an instructional model for online task-based interactive listening (OTIL Model) for EFL learners, and to investigate the effects of using online task-based interactive listening (OTIL). The present study, therefore, was carried out based on the following research questions:

1)   What are the necessary components and logical steps of the instructional model for the development of online task-based interactive listening for EFL learners?

2)   How effective is the developed OTIL Model in facilitating EFL students' listening ability development?

In order to study the effects of the OTIL lessons, second-year non-English major undergraduate students of Tongren University, China (TU) in which the researcher is employed were selected as the research sample. College English is compulsory for all non-English major students at TU. According to the CECR, college English teaching runs throughout the first two years. After these two years, the listening competence of students was still weak in general (Liu, 2009; Yang, 2008). The current practice of teaching listening could not bring the students' initiative fully into play and students could not set their own pace according to their own needs. Students usually played a very passive role in such learning environments. Yang (2008) pointed out the current college English listening teaching in TU generally comprised a teacher, textbooks, blackboard, chalk, CDs and tapes. Students sat in rows listening to CDs or tapes without interaction. None of the teachers used E-learning to teach college English listening.

After analyzing the technical environment of the learning context at TU, Moodle was used as the online learning platform for English listening at TU. Moodle, abbreviation for Modular Object-Oriented Dynamic Learning Environment, is a free source E-learning software platform, an example of a Learning Management System (Wikipedia, 2011). By this design, Moodle offered a lot of useful and interactive tools such as Wiki, Forum, Chat and Quiz. Instructors could apply different formats of social interaction and collaboration to their teaching. Online interactive listening aimed to create a highly interactive E-learning environment for listening, during which listeners had maximum interaction with peers and teachers. In addition, task-based approach (TBA) was applied to combine with online interactive listening teaching to implement interaction effectively.

2. Review of Instructional Design Models

Instructional design plays an important role in language teaching due to the fact that instruction is "a systematic process in which every component (i.e., teacher, learners, materials, and learning environment) is crucial to successful learning" (Dick, Carey & Carey, 2005, p. 2). Since 1940s, a good number of instructional design models have emerged to meet different teaching purposes. However, the present study just reviewed four relevant models, including ADDIE Model, Dick and Carey Model, Kemp Model and SREO Model.

2.1 ADDIE Model

The ADDIE model, a generic and simplified instructional systems design model, is short for Analyze, Design, Develop, Implement, and Evaluate. This model represents a dynamic, flexible structure for building effective instruction and performance support tools (see Figure1). Although there were more than 100 different ISD models, most of them were generated based on the generic ADDIE model (Kruse, 2011). However, the source for the original reference to the ADDIE model was obscure.

…the ADDIE Model is merely a colloquial term used to describe a systematic approach to instructional development, virtually synonymous with instructional systems development (ISD). The label seems not to have a single author, but rather to have evolved informally through oral tradition. There is no original, fully elaborated model, just an umbrella term that refers to a family of models that share a common underlying structure.(Molenda, 2003, p. 34)
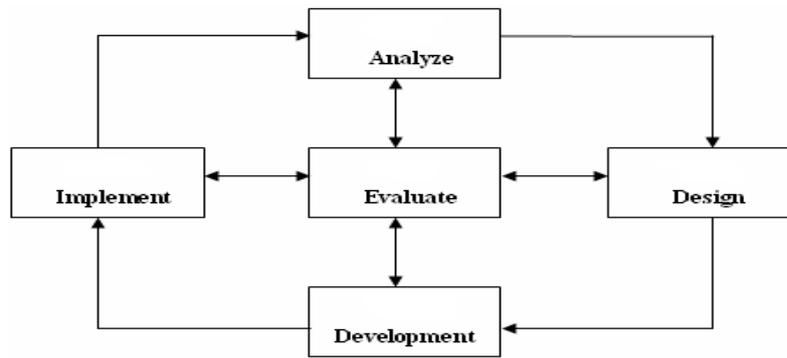
Figure 1. The Elements of ADDIE Model (Li, 2010)

2.2 Dick and Carey Model

Dick and Carey model (2005) is one of the better-known instructional design models. The model in the book "*The Systematic Design of Instruction*" written by Dick and Carey (2005) was "first taught in a course at Florida State University in 1968"(p. xviii). This model is a procedural system consisting of ten major process components (see Figure 2). The authors (2005) described this model as a systems approach because each component had an input and an output and was related to each other. Reasons for advocating a systems approach to instructional design were listed as follows:

1)   The focus is on what learners are to know or be able to do when the instruction is concluded.

2)   Each component in the system is linked carefully to the other, especially the relationship between the instructional strategies and the desired learning outcomes.

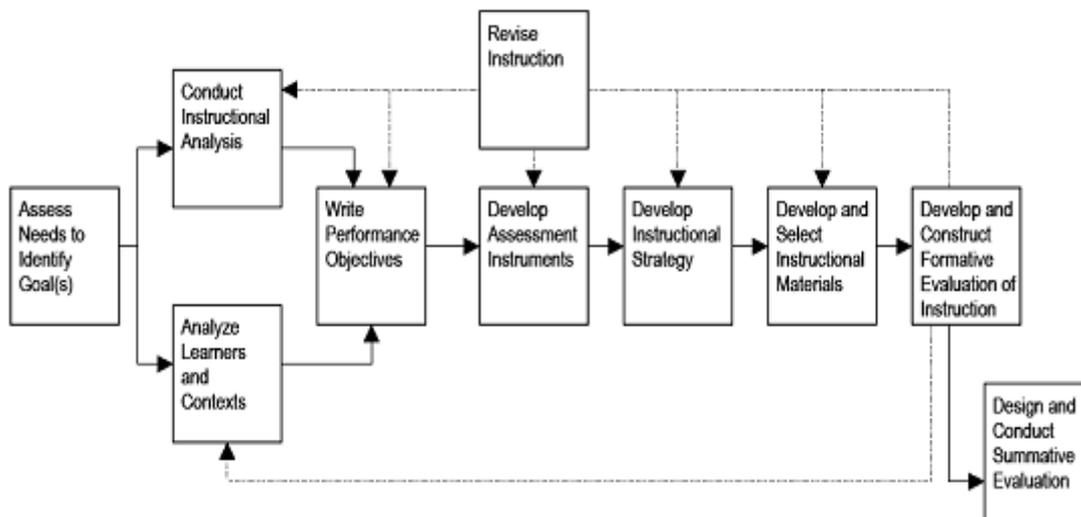3)   The instructional design is empirical and replicable process.

Figure 2. Dick and Carey Systems Approach Model (Dick, et al., 2005, pp. 2-3)

2.3 Kemp Model

Kemp model is a comprehensive instructional design plan, which describes a holistic approach to instructional design that considers all factors in the environment (Morrison, Ross, & Kemp, 2004). This model is extremely flexible and is designed to focus on content and appeal to instructors (see Figure3).

Morrison, Ross and Kemp (2004) pointed out that the Kemp model had three elements that differentiated it from some other models: 1) instruction was considered from the perspective of the learner; 2) the model took a general systems view towards development with instructional design being presented as a continuous cycle; and 3) the model emphasized management of the instructional design process. The model components are

independent of each other. The designer can start at any point in the process which makes sense for a particular project and change the order of the steps and revisions as they make sense in a project. Not all projects start at the same place or are open to the full range of choices for media and strategies which the model implies (Teorem.info, 2011).
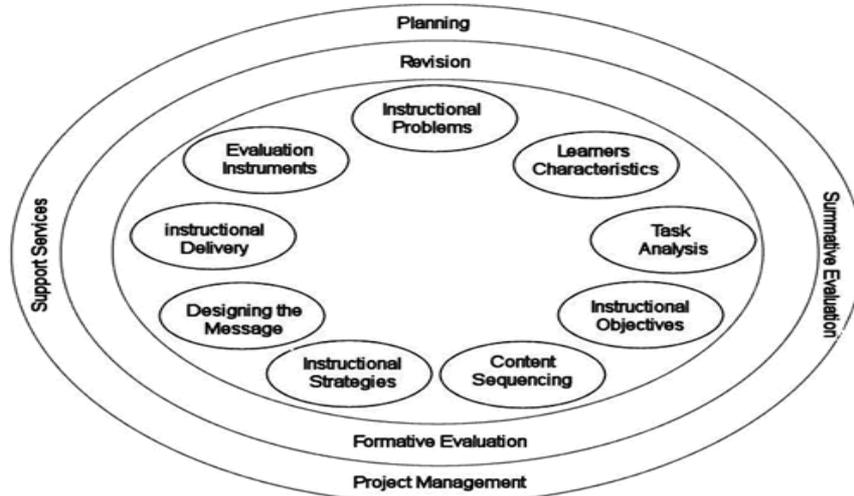

Figure 3. The Elements of Kemp Model (Morrison, et al., 2004)

2.4 SREO Model

Suppasetseree's Remedial English Online Plan (SREO) was designed by Dr. Suppasetseree in 2005. SREO Model is an Internet-based instructional system for language teaching which focuses on interactivity or interaction involving learners with the content (see Figure 4).
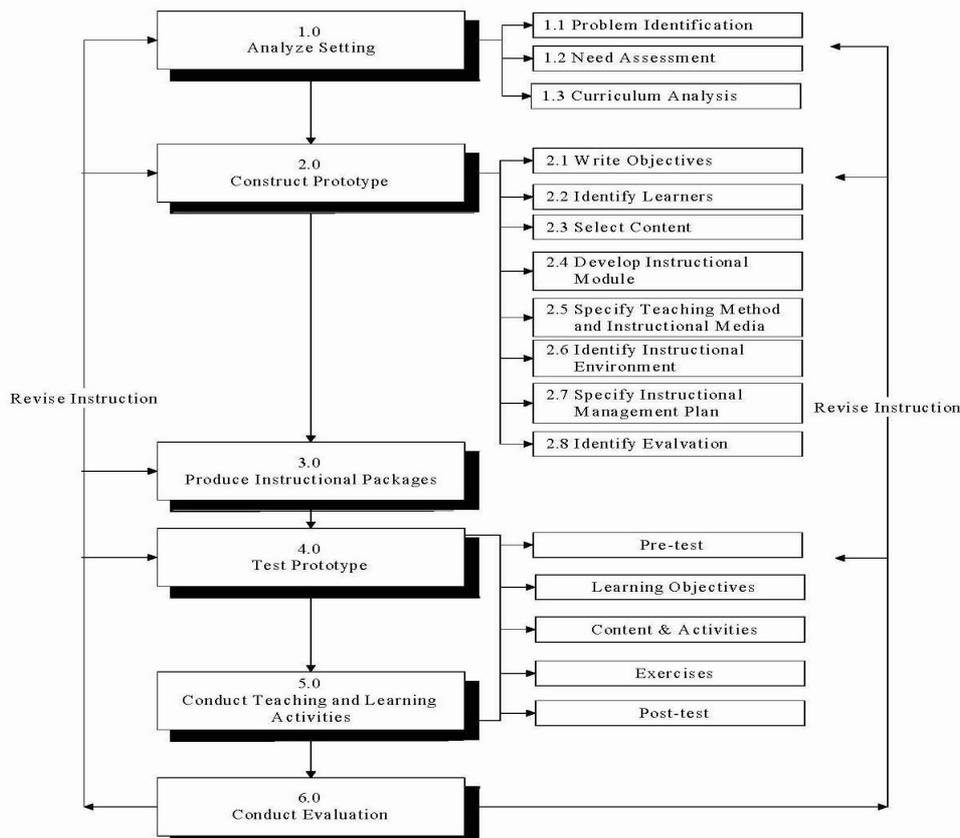

Figure 4. SREO Model (Suppasetseree, 2005, p. 108)

This model considered instructional design issues for E-learning: structure, content, motivation, feedback, interaction, and involvement (Herridge-Group, 2004). The two steps, developing instructional module and specifying teaching methods and instructional medium, were critical for an Internet-based instructional system design. They could provide useful interactive tools and effective feedback which motivate student to succeed in English learning.

2.5 Limitations of the Models

Despite the contribution made so far, several limitations relevant to the four models have emerged. First, ADDIE Model is the guideline for an instructional designer to create instruction. This model, however, has no details at each stage. As a result, the instructional designer has to decide how much detail is required at each step. Second, according to Gustafson and Branch's (2002) taxonomy of models, Kemp Model, a classroom-oriented model, can only get an output of one or a few hours of instruction. The components in this model are independent. When developing a piece of instruction using few or no additional resources, much of the content is in the heads of the facilitator not in the hands of the learner (Herridge-Group, 2004). Third, they are all most directly applicable to developing print-based instruction (Herridge-Group, 2004), except SREO Model which is the Internet-based instructional system design. However, SREO Model only focused on Remedial English Online instead of other skills.

From the limitations above, none of them is suitable to be an online listening teaching model, nor able to deliver listening courses via the Internet or Intranet. Therefore, the present study goals were to develop an appropriate instructional model for English listening teaching that would combine the principles of practicality, knowledge and interest, and facilitate mobilizing the initiative of both teachers and students.

3. Research Methodology

The present study consisted of two phases, namely developing the OTIL Model and investigating effects of using OTIL. Firstly, after the OTIL Model had been designed, it was sent to three experts in instructional systems design and the English language teaching field to review and evaluate whether the model was appropriate, clear and easy to implement. Secondly, two intact classes were selected to participate in the experiment to investigate the effects of using OTIL in the second semester of the academic year of 2012.

3.1 Phase One: Developing the Instructional Model for Online Task-Based Interactive Listening (OTIL Model)

3.1.1 Participants

The participants were selected through purposive sampling to review and evaluate the OTIL Model. They consisted of three experts in both instructional systems design and the English language teaching field. They were from 2 universities of Thailand, and all of them had Ph.D degree, among them was a senior professor.

3.1.2 Instrument

An evaluation form of the OTIL Model was designed by the researcher as there has been no previous related study. The form consisted of two parts. Part One included 8 items on a five-point scale (5 = very strongly agree, 4 = strongly agree, 3 = agree, 2 = slightly agree, and 1 = least agree). Part Two was an open-ended question about ideas and comments on the OTIL Model.

3.1.3 Data Collection and Analysis

Before the instruction implementation, the evaluation form of the OTIL Model was sent to the experts for evaluation. The OTIL Model was revised on the basis of the experts' evaluation and suggestions. Descriptive statistics were used to calculate arithmetic means and standard deviation.

3.2 Phase Two: Investigating the Effects of Using Online Task-Based Interactive Listening (OTIL)

3.2.1 Participants

Two intact classes of Tongren University, China were selected. They were second-year non-English major undergraduates. They were selected because the number of students in each class was the same size and the students' English proficiency level was similar. The college English final examination in the first semester of academic year 2012 was used to determine the sample. The total number of the samples was 92 students: Class 3 of Chinese Major 46 students ($\bar{x}$ =64.72, SD=8.471) and Class of Politics Major 46 students ($\bar{x}$ =64.78, SD=11.105). Class 3 of Chinese was chosen as the experimental class and Class of Politics as the control class.

3.2.2 Instruments

Two instruments were employed, including the OTIL lessons and the two English listening tests.

Following the developed OTIL Model, the researcher constructed the OTIL lessons. The learning tasks and activities are embedded in Moodle modules, such as Forum, Glossary, Chat and Quiz.

In this experiment, two English listening tests were employed for the pre-test and post-test. The listening comprehension tests were adapted from the listening sub-tests of the CET 4 which was designed to evaluate the overall English proficiency of undergraduates in Chinese universities by MOE. Before the main study, both tests had been examined for reliability with the students who are not from the classes of the experiment.

3.2.3 Data Collection and Analysis

Before the experiment, the experimental class and the control class were pre-tested. Only participants in the experimental class were involved with the OTIL lessons via Moodle, while the students in the control class were still instructed with the college English listening teaching via multimedia (Non-Internet). After the experiment was conducted, the experimental and control classes were post-tested as to analyze whether there are any significant differences in listening comprehension between the experimental and control classes.

The computer software program, SPSS, was used to conduct descriptive and statistical analysis in the present study. Descriptive analysis involved the mean score of both the pre-test and post-test results. The statistical analysis was a paired-sample T-test to compare the participants' mean scores on the pre-test and post-test. Analysis of covariance (ANCOVA) was used to remove extraneous variability (students' prior English listening ability) that derives from pre-existing individual differences.

4. Results

4.1 Design of the Instructional Model for Online Task-Based Interactive Listening (OTIL Model)

The OTIL Model is a guideline to help instructors to construct English listening lessons which enhance the possibility of listening learning and encourage the engagement of learners. The orientation of the OTIL Model is systematic and web-based, using interactive listening instruction with task-based approach. This model includes 6 phases and 17 steps in the process (see Figure 5).
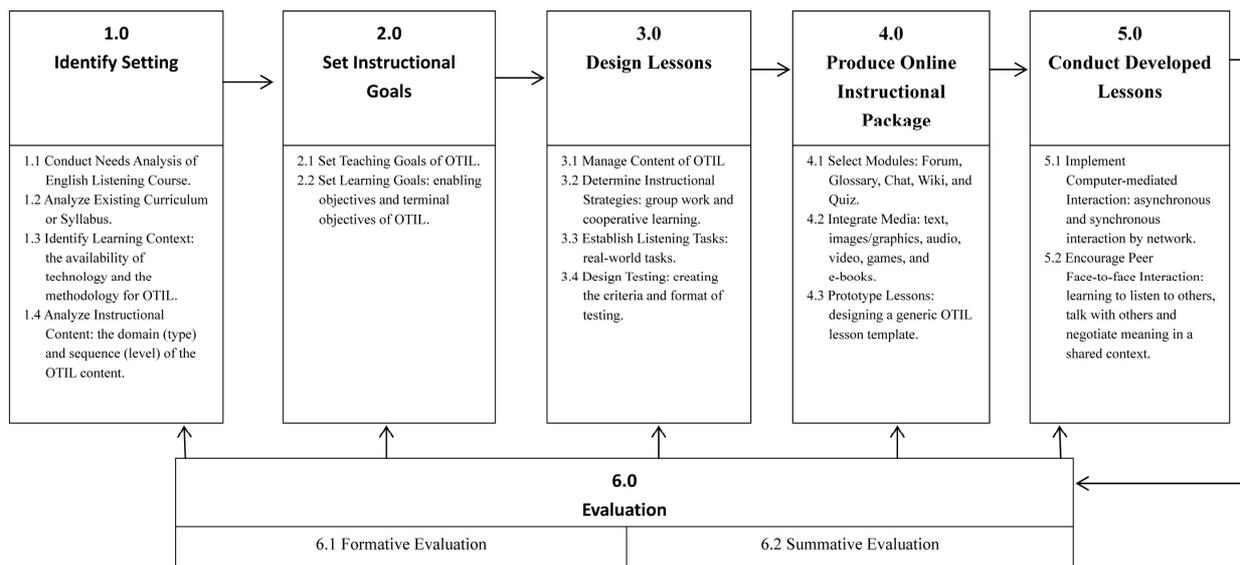
Figure 5. The Instructional Model for Online Task-based Interactive Listening (OTIL Model) for EFL Learners

Phase 1.0 Identify Setting

Before the instructional process is designed, it is necessary to identify the background and problems of English listening instruction. This phase is the base of the whole instructional process.

1.1 Conduct Needs Analysis

This step is to identify the needs and problems of the learners of English listening. The findings of the analysis can contribute to setting instructional goals and learning objectives and can help instructors to draw the main components and requirements into OTIL.

1.2 Analyze Existing Curriculum

It is necessary to analyze the existing curriculum or syllabus because it is a defined and prescribed course of studies. Instructors should focus on analyzing the requirements for listening skills.

1.3 Identify Learning Context

Analysis is focused on the technical environment and instructional structure. For the technical environment, instructors are concerned about organizing minimum requirements including computers, the Internet, the Intranet, network servers, server capabilities, software, and hardware. For instructional structure, instructors should research teaching methodology to fit English listening instruction.

1.4 Analyze Instructional Content

Instructor would analyze the domain (type) and sequence (level) of the OTIL contents. A content domain analysis identifies whether the main purpose of instructional content is to change the learners' cognitive, emotional, or physical status, while a content level analysis determines the optimal range of the sequence of learning required for achieving the instructional goal (Chyung & Trenas, 2009).

Phase 2.0 Set Instructional Goals

Instructor needs to specify what the learners will be able to do when they complete the instruction. The goals should be clear, concise, complete and manageable.

2.1 Set Teaching Goals

The goals are about what the instructor plans to teach, what instructors will cover in this course and how instructors will cover it. These goals are usually broad, and at times vague depending on different learners.

2.2 Set Learning Goals

Learning goals describe what exactly instructors expect learners will learn. The goals involve enabling objectives and terminal objectives.

Phase 3.0 Design Lessons

Instructors should outline how to reach the instructional goals. Attention should be given to the effectiveness of lesson elements and criteria for designing assessment.

3.1 Manage Content

Authentic resources for the instruction, which are found in books, online or in other media, are required to support English listening instruction and learners.

3.2 Determine Instructional Strategies

Based on learning objectives, instructors are required to determine appropriate instructional strategies to maximize learning effectiveness. Based on the nature of listening comprehension and the features of listening instruction, the OTIL Model focuses on interactive instruction.

3.3 Establish Listening Tasks

The tasks in the OTIL lessons will be designed to real-world tasks according to the TBA principles.

3.4 Design Testing

Task-based assessment should be used in the OTIL Model. Instructor needs to create the criteria and format of testing. The assessment should provide learners feedback and remediation when necessary.

Phase 4.0 Produce Online Instructional Package

Instructors should decide what software or online tools will be used as an instructional platform or tools to deliver the lessons according to the learning context analysis.

4.1 Select Modules

Software usually offers the instructor modules or tools to create a course website and provide access control. According to the instructional goals, the modules which include "Forum, Glossary, Chat, Wiki and Quiz" can be chosen to deliver the instruction.

4.2 Integrate Media

Media for online instruction includes text, images/graphics, audio, video, games, and e-books. All media should be optimized to match the minimum requirements of the available hardware for the OTIL instruction and be

delivered effectively for improving listening ability.

4.3 Prototype Lessons

The OTIL lesson template should be interactive and flexible. The prototype will be formatively evaluated to check whether it serves the instructional goals.

Phase 5.0 Conduct Developed lessons

The teaching process should emphasize learner-centered learning and learning in interaction.

5.1 Implement Computer-mediated Interaction

Computer-mediated interaction allows learners to communicate with other learners in both asynchronous and synchronous modes by network and permits one-to-one and one-to-many communication.

5.2 Encourage Peer Face-to-face Interaction

Peer face-to-face interaction should be managed in OTIL, focusing on the learning process by encouraging interaction among students.

Phase 6.0 Evaluate

Evaluation should be used to evaluate learning processes and outcomes.

6.1 Conduct Formative Evaluation

Formative evaluation is present in each stage of the OTIL Moodle. It provides the information for ongoing improvement and adjustment.

6.2 Conduct Summative Evaluation

At the end of the instruction, a summative post-test will be used to collect data to assess the effectiveness of the instruction.

To sum up, OTIL Model is an online interactive listening instruction design with task-based approach. The model consists of the 6 phases and 17 steps. As a system-oriented model, each step is critical and need to be completed. Instructional strategies in the OTIL Model rely on interaction and cooperative learning with real-world tasks. Additionally, The OTIL Model is a learner-centered instruction design, emphasizing interaction.

4.2 The Results of the Experts' Evaluation of the Instructional Model for Online Task-Based Interactive Listening

The OTIL Model together with the evaluation form designed by the researcher was sent to experts in instructional systems design and the English language teaching field for evaluation. Descriptive statistics were used to calculate for arithmetic means as shown in Table 1.

The results revealed that 6 items received the highest mean score ($\bar{x}$ =5.00, SD=0.00), including Item 1, Item 4, Item 5, Item 6, Item 7 and Item 8. The finding indicates that the experts strongly agreed that 1) the OTIL Model is appropriate in English listening teaching for EFL learners; 2) the OTIL Model can help enhance learner-instructor, learner-learner and learner-content interaction with a task-based approach; 3) the OTIL Model provides the instructor or the learner immediate feedback via the Internet or Intranet, and 4）the OTIL Model has sufficient flexibility to be effective in teaching and learning in current instructional context.

Table 1. The Results of the Experts' Evaluation toward the Instructional Model for Online Task-based Interactive Listening

No.	Statement	$\bar{x}$	SD
1	The components of the OTIL Model are appropriate.	5.00	0.000
2	The steps in the OTIL Model are clear and easy to implement.	4.67	0.577
3	Each component in the model has appropriate connection.	4.67	0.577
4	The OTIL Model can help enhance learner-instructor interaction.	5.00	0.000
5	The OTIL Model can help enhance learner-learner interaction.	5.00	0.000
6	The OTIL Model can help enhance learner-content interaction.	5.00	0.000
7	The OTIL Model can provide the instructor or the learner immediate feedback.	5.00	0.000
8	The OTIL Model has sufficient flexibility to be effective in teaching and learning in current instructional context.	5.00	0.000
	Total	4.92	0.282

It should be noted that Item 2 and Item 3 received a mean score of 4.67 (SD=0.577).   This can be explained in

that the experts agreed that the steps in the OTIL Model are clear and easy to implement and have appropriate connection, and each component in the model has appropriate connection. Overall, the OTIL Model was rated by the experts at the mean score of 4.92 (SD=0.282) which indicates the model is appropriate and satisfactory.

4.3 The Results of the Effects of Using Online Task-based Interactive Listening

Tests were used to evaluate two classes of students' listening achievement and compare students' English listening ability before and after the treatment. The results were presented in Table 2.

Table 2. The Results of Students' Listening Achievement

Classes	N	Pre-test		Post-test	
		$\bar{x}$	SD	$\bar{x}$	SD
Experimental Class	46	57.30	8.897	75.57	8.702
Control Class	46	57.17	8.16	66.35	9.374

As can be seen, the experimental class average score of pre-test and post-test score were 57.30 (SD=8.897) and 75.57 (SD=8.702) respectively, whereas the control class' average score of pre-test and post-test were 57.17 (SD=8.16) and 66.35 (SD=9.347) respectively. Clearly, no significant differences were found between the average score of two classes' pre-test (P=0.942, P≤0.05), according to Independent-Samples T-test analysis of SPSS. The finding showed the students' listening ability in both classes was at the same level. After the intervention, both the experimental and control classes had higher mean scores. In order to examine whether there was a difference between the pair scores (Paired Differences) of experimental and control classes, pre-test and post-test scores of each class were compared by using a paired-samples T-test. The findings were shown in Table 3.

Table 3. The Results of the Paired Samples T-Test

Classes	Tests	Paired Differences				T	df	Sig. (2-tailed)
		$\bar{x}$	SD	95% Confidence Interval of the Difference				
				Lower	Upper			
Experimental Class	Pretest - Posttest	-18.26	4.855	-19.703	-16.819	-25.50	45	.000
Control Class	Pretest - Posttest	-9.17	4.312	-10.454	-7.893	-14.43	45	.000

In Table 3, both experimental and control classes had significant differences between the pre-test and post-test (P=0.000, P≤0.05). Therefore, both classes of students made a great progress in English listening learning. However, in order to evaluate the effects of using OTIL, the post-test score of experimental and control classes was compared by using the analysis of covariance (ANCOVA) model in SPSS. The results were presented in Table 4.

Table 4. The Results of a Comparison of the Post-test Score for the Experimental and Control Classes

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	7463.978[a]	2	3731.989	179.360	.000
Intercept	669.914	1	669.914	32.196	.000
pretest	5509.891	1	5509.891	264.806	.000
Classes	1903.611	1	1903.611	91.488	.000
Error	1851.848	89	20.807		
Total	472520.000	92			
Corrected Total	9315.826	91			

According to Table 4, there was a significant difference in the post-test score between the experimental and control classes (P=0.000, P≤0.05). The finding showed that the students of experimental class who had been instructed in the OTIL Model using Moodle made more demonstrable progress than those of control class in English listening. Therefore, the OTIL using Moodle appeared to help EFL learners learn more effectively and develop their listening skills and ability as expected.

5. Discussion

The CECR (MOE, 2007) claimed universities in China should explore and establish a web-based listening teaching model and deliver listening courses via the Internet or Intranet. To construct an effective instructional method for college English listening, the design of an appropriate model for listening instruction was very important. In order to meet the requirement of the CECR, the OTIL Model was designed as an online teaching model focusing on listening. This model was developed after analyzing and synthesizing the four instructional design models: ADDIE Model, Kemp Model, Dick and Carey Model and SREO Model. Seven steps were conducted in developing the OTIL Model: 1) reviewing knowledge on the OTIL Model; 2) doing need assessment of the OTIL Model; 3) developing conceptual framework of the OTIL Model; 4) securing experts' opinions on the OTIL Model conceptual framework; 5) drafting the prototype for the OTIL Model; 6) Trying out the OTIL Model; and 7) revising and reporting the OTIL Model. After these seven steps, the OTIL Model was rated to be "appropriate and satisfactory" ($\bar{x}$ =4.92, SD=0.282).

The OTIL Model is a systems-oriented model whose output is an employable English listening course. It provides a problem-solving process to guide instructors through identifying setting, setting instructional goals, designing lessons, producing online instructional package, conducting developed lessons and evaluation and focusing more on interacting with information. Every component in a systematic process is crucial to successful learning (Dick, et al., 2005). The OTIL Model consists of 6 phases, 17 steps. All interrelated components can work together toward English listening instruction goal. Therefore, the experts strongly agreed that the components of the OTIL Model were appropriate ($\bar{x}$ =5.00, SD=0.000).

Nowadays, Internet technologies are an integral part of our lives. Instructional designers have new and more flexible technologies in designing and learners have a multitude of choices. The Internet has opened the way for courses, seminars, discussion forums and other approaches to learning to be delivered online with innovative ways to interact with instructors and other students (Module, 2008). According to Wilson and Stacey (2004), new technologies have changed the nature of instruction by providing a way for communities of learners and their teachers to interact with one another despite being situated in differing geographical locations. Online interaction is required in a flexible instructional model of learning for campus based learners. Furthermore, online activities can give students feedback immediately by automatically correcting their online exercises, and grade their exercises and tests, so that students can monitor how they are doing and take corrective action if required. Instructors can evaluate the learner's achievement from feedback whether the effects meet the expectations and goals for the design. In the OTIL Model, web-based activities such as Forum, Glossary, Chat, Wiki, and Quiz are required, so that the experts strongly agreed that the OTIL Model can help enhance learner-instructor, learner-learner and learner-content interaction synchronously and asynchronously with task-based approach, and provide the instructor or the learner immediate feedback ($\bar{x}$ =5.00, SD=0.000).

However, there were 2 items that were rated at the level of mean score 4.67 (SD=0.577). This was due to the fact that the OTIL model still had some weakness after the model was developed. These included the names of phases, the explanation of steps and the flow of the OITIL Model. The experts' comments were summed up as follows: 1) some names of phases were not clear enough to represent the process. For example, the fourth phase of the model had been named Prototype and the fifth phase Implement Instruction; 2) some steps should be explained in a clearer way, for example, Set teaching goals, and Determine instructional strategies. This is because a systematic model requires a high to very high level of instructional design skill (Gustafson & Branch, 2002); and 3) the flow of the OTIL Model seemed illogical because of formative evaluation. Then, the OTIL Model was modified and revised following the experts' suggestions.

Moreover, the results show that the post-test achievement of the experimental class was significantly higher than those of the control class (P=0.000, P≤0.05). It reveals that the OTIL lessons using Moodle showed evidence of enhancing listening teaching and learning. The lessons via Moodle could facilitate and encourage interaction, and make learning courses interactive (Cole, 2005). Wang and Miao (2003) pointed out listening comprehension was an active and creative activity and an interaction between listeners and speakers. Listening tasks in OTIL were designed so as to allow for interaction between the instructor and students or among students by using different formats of interaction. Students could be divided into subgroups, interact with each other synchronously

in chat rooms, or engage in asynchronous discussions in Wikis and Forums (Cole, 2005). OTIL also provided students with an online cooperative learning environment, in which students could exchange information and share resources.

The obvious characteristic of the OTIL lessons was that instruction in listening was more learner-centered than teacher-centered. Rivers (2000) pointed out teacher-centered classrooms could not be interactive classrooms. "Real interaction in the classroom requires the teacher to step out of the limelight" (p. 9). The goal of OTIL lessons using Moodle was for students to take on more of the responsibility of learning and become more actively involved in the learning process. In Moodle, the spotlight was on the students, and instructors assumed the role of facilitator. In addition, OTIL lessons offered students ways to make use of their cognition to recall their past experience and exchange their personal viewpoint, while the teacher guided them to facilitate their learning process.

The findings of the present study agreed with Suppasetseree (2005) who developed Remedial English lessons via the Internet. He found that the achievement of students who received tutoring via the Internet had a higher average post-test score ($\bar{x}$ =24.93) than those who received tutoring via the face-to-face method ($\bar{x}$ =24.77). It could be stated that the Internet-based lessons promoted students' English learning achievement. Moreover, Dennis (2012) constructed Blended Online Learning Approach (BOLA) packages. The results showed that the subjects obtained higher mean scores ($\bar{x}$ =12.1) after using the BOLA packages. Dennis explained that the BOLA packages promoted autonomous learning which encouraged students to learn by themselves and helped them to reach their learning achievement goals more effectively. In addition, Wei (2012) developed a Moodle platform to teach college English listening in China. The finding showed that the post-test achievement had a significant difference between experimental and control groups. Moodle platforms have demonstrated effectiveness in interactive and autonomous learning.

To sum up, the OTIL Model is shown to be an appropriate model for college English listening teaching in China which could meet the need of the CECR. It could provide a problem-solving process to guide instructors through six phase 17 steps to the instructional goal. With the advantages of the OTIL lessons via Moodle, the student of the experimental class made significantly more progress in listening comprehension than those of the control class. Thus, English listening teaching instructed with the OTIL lessons via Moodle could promote students to learn English listening more actively, effectively, and independently.

6. Conclusion

The present study has been conducted in order to solve an urgent issue articulated in the CECR, to establish a web-based listening teaching model and deliver listening courses via the intranet or campus network. The objectives of the study were to develop an online listening instructional model for EFL learners, and to investigate the effects of using OTIL. The findings revealed that the OTIL Model was suitable to teach English listening online with task-based approach, emphasizing interaction, activity and flexibility. The OTIL Model brings broad changes to the traditional way of teaching listening skills in English and the relationships between teachers and students. Students could learn English listening anytime and anywhere through OTIL. For pedagogical implication, the development of the OTIL Model might offer practical solutions for the development of English teaching and improve students' listening ability in China.

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