An Investigation of an Optimizing Model of Autonomous Learning of TEFL using Multimedia and the Internet technologies (ICT)

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Abstract
This is an account of a one-year experiment which sought to optimize student learning by adopting an autonomous learning model of Teaching English as a Foreign Language (TEFL) using multimedia and the Internet technologies. The experiment was sponsored by the Chinese Ministry of Education and carried out at Shanxi University of Finance and Economics (SUFE). The study involved three teachers and 550 non-English major undergraduates of the university. The researchers set out to understand the consequences of encouraging learner autonomy when new teaching strategies were introduced to enhance the learning process using multimedia in an Internet environment. Disadvantages of the traditional teaching model are discussed and some causes of existing problems in English teaching practice become evident. A critical review of the literature of learner autonomy and constructivist theory, as applied to TEFL, contextualizes new ideas for an autonomous learner model of TEFL with multimedia and the Internet communications technologies (ICT). These new educational methods appear to have led many students to become autonomous language learners. We conclude that a key issue in cultivating autonomous learning is that teachers must first become autonomous learners themselves. They need to realize that in this new regime they play a very different role in the teaching process. Teachers need to recognize their role as guides, facilitators and anticipators, both in and outside class. Results of the investigation are expected to contribute positively to TEFL teaching in Chinese universities.

Key words: teaching English as a foreign language (TEFL), Learner autonomy model (LAM), multimedia and the Internet technologies, otherwise known internationally as, Information and Communications Technology (ICT)

1. Introduction

As a consequence of China entering the globalized economy and becoming a member of the World Trade Organization, the demands for higher and higher levels of workplace competence in English have required immediate and substantial changes in the preparation of college students’ English capability. Indeed, there has been a widespread recognition that English speaking proficiency directly affects the national economy and students’ employment prospects.

As a result of the rapid commercial and industrial expansion and change, all workers can expect to need periodic re-skilling, consequently tertiary providers are trying to emphasize the importance of students becoming life-long-learners. Tertiary providers need to stress the importance of opening-up students’ potential, paying attention to individual differences, instructing them to actively participate in and cultivate their capacity as autonomous learners. The Learner Autonomy Model (LAM) has become an important aspect of the research project of English teaching at Shanxi University of Finance & Economics (SUFE) that is reported here. We believe that the LAM is an effective way of raising classroom-teaching quality while cultivating students’ life skills.
The current situation in China’s higher education is one of dramatic change and this has brought about an enormous expansion of enrolments in English classes, resulting in a chronic shortage of English teachers. A further complication is that students come to the universities from all over China, from diverse provincial educational systems. As a result, students’ English proficiency tends to reflect the systemic differences of their initial education and the level of their competence, in both receptive and productive English language skills, is considerably varied. However, the rapid development of computer technology has provided access to a wide range of electronic communications media and the Internet (ICT). This development, in turn, gives tertiary education providers scope to develop strategies designed to overcome the limits imposed on students by their diverse backgrounds by encouraging their capacity as autonomous language learners. The application of ICT in foreign language teaching and learning has certainly brought about innovation in teaching strategies, concepts, teaching content, teaching models and teaching methods to provide a differentiated curriculum.

Until recently most English teaching in China concentrated on the analysis of grammar and study of written language, rather than setting out to develop students’ capacity to speak the language fluently. Traditionally students relied excessively on teachers to direct them, and, while the culture emphasized discipline, students tended toward passivity as learners. Although students who learned in such a regime gained valuable knowledge about the grammar of the language, and memorized many English words, too few students know how to apply their knowledge to real life speaking situations. Frequently, when interacting with native English speakers students are not able to make them understood, and neither can they understand what is said. Despite the fact that many students have passed College English Test Band 4, or even Band 6, (Chinese Ministry of Education) all too often those students are not sufficiently confident to face an interview for employment in English. The old grammar-translation method of foreign language teaching has been found inadequate for these new times.

Aware of these new demands the Chinese Ministry of Education launched a new teaching reform program of College English in China during February, 2004. The program set out to meet the national need for a considerable body of professionals who will be capable of developing international trade contacts. The central government intends to raise the overall foreign language proficiency of college students across the nation.

In order to solve the existing problems of outdated teaching methods and to achieve the objectives of College English Curriculum Requirement, a new direction in tertiary teaching has emerged. The task of raising students’ English comprehension competence by using ICT in the Chinese context has become an urgent research project for language teachers and educators. Consequently, the authors put forward a research program intended to optimize learner autonomy by engaging students in a model of TEFL which gave all of them access to ICT. This was done in concert with the new plan for English teaching practice at SUFE. The investigations of this research during the past year long teaching experiment have provided some new ideas for the teaching reform program of the Chinese Ministry of Education.

2. Disadvantages of the traditional teaching model and current problems

College English teaching in China has made great progress since the central government opened the door to the outside world. Remarkable changes and achievements have been made across the country in order to improve tertiary students’ English language proficiency levels. However, Chinese students’ English base level language proficiency at the end of their high school years tends to be varied and there are widely different levels of competence. As a result, the standard of their
development at each university in China is likely to be dissimilar and unequal in quality. As Zhou Liuxi (2003) argues, teaching English as a foreign language at a Chinese university is an unusually varied and challenging enterprise.

For many years, the Grammar-Translation Method dominated English teaching and, as a result, those students who succeeded have shown themselves to be obedient and compliant in their English learning, rather than being imaginative, experimental and adventurous. In class they listened to the teachers and took notes but did not anticipate the possibilities of classroom activities or ask questions. In such classes there is generally no exchange of information (Yang Xuanyan, 2003). Indeed, the only language response that students give is in answering questions or reading from the text. Teachers have primarily paid attention to the linguistic points of English and have not addressed points concerning learning strategies. As a result, we are faced with the serious situation of a “time-consuming and less effective” model of English teaching in China (Li Lanqing, 1996, p. 14).

At present, the widespread use of the traditional teaching method of 100 years ago is evident in many high-schools across the country is still a significant obstruction to the development of learners’ language skills and abilities in tertiary education. Even in some universities the traditional model persists, the teacher is recognized as the sole information-provider to a cohort of passive students. Although students no longer write notes on slates, and they often sit in moveable desks, far too many teachers still use the “I lecture; you listen and write” method of teaching and depend heavily on textbooks for the structure of the course. These teachers serve as conduits and attempt to transfer their thoughts and meanings to the passive students. Such teachers seldom consider ICT as a way of raising learning efficiency. Although students generally master a lot of language knowledge, few are able to develop confidence in expressing themselves in real life situations. They lack adequate language input from their teachers and there are no opportunities for them to develop genuine communicative skills.

At this point I’d like to use myself as an example of the traditional Chinese approach to English language education. I began to study English in the 1970s, when classes were as traditional as they have ever been. Teaching staff and students gave all of their attention to English grammar - both in class and outside class, instead of trying to cultivate their skills of listening and speaking. Until the 1990s, reading ability was almost the sole concern in classroom teaching. As a product of that kind of regime I have been learning and teaching English for many years. And so, when I went to Australia in February 2004, I found my biggest problem was my inability to speak and listen effectively. Although I had little difficulty understanding the many written texts I encountered I frequently had difficulty in making myself understood, and I was constantly blocked from understanding what was said to me.

Indeed, it took me at least three months until I had become sufficiently accustomed to the language of the English-speakers around me that I could usually understand what was being said. I found that I needed time to build up my confidence in listening and speaking. I believe that the reason I could not apply my English language to real life situations was that I had learned a great deal of grammar and many words, but almost nothing that could be called conversation. It became obvious that my teachers had ignored the challenge of making me speak to them, perhaps because of their own lack of confidence in the language. As a product of the traditional approach I had a very great difficulty in communicating in the reality of an English language speaking community.

As a part of the year of research, a survey of students at SUFE who were learning English showed that, at present, college students’ autonomous learning ability is particularly weak, as demonstrated
from the following responses. First, 61% of the students have no learning plan and even when they do have one, they have little confidence in their capacity to fulfill them. Secondly, 54% of the students cannot preview the lessons before class according to the teachers’ requirements. Thirdly, over 80% of the students are never active in class; always keeping silent, thus classroom-learning efficiency is very low. Fourthly, 30% of the students do not make good use of their spare time to study English and have little understanding of appropriate methods to learn English. Fifthly, few students have effective methods of self-evaluation and never assess their English learning achievement, except that they are required to attend some regular examinations. In a commentary on Chinese educational methods, Mc Garry (1995: 1) notes that: "The majority of students are still being taught in ways which promote dependence, which leaves them ill-equipped to apply their school-learnt knowledge and skills to the world beyond the classroom". A point that emphasizes the role of the teacher is crucial in promoting learner autonomy as central to student success in language learning.

The disadvantages of the traditional teaching model that demands students’ slavish dependency on teachers requires that we should explore new approaches to teaching. The Foreign Language Faculty at SUFE recognized that it was their own authoritarian approach which encouraged student passivity, and that was one of the real enemies of learning. Staff recognized that students needed to develop their own learning strategies if they were to become autonomous learners. Staff came to see that a shift in emphasis to new teaching methods that were primarily learner-centered might encourage learner autonomy. Faculty believed that students would become independent, creative individuals in a scholarly society when they worked with them in pursuit of success through independence, and students would strive for that goal when given the encouragement to do so.

3. Optimizing the learner autonomy model with ICT

3.1 Introduction

In this globalized society, especially in the Chinese context, we have a pressing need to cultivate students’ autonomous language learning capacity. In these information rich times, students need to deal with a vast range of information that relates to the rapidly changing nature of the educational environment. Such is the rapid pace of change that the education students receive in school is no longer adequate for them in their work lives. Only by developing their capacity to become life-long learners who are constantly developing and improving themselves, can people adapt themselves to the increasing challenges of modern society.

The autonomous learning model of teaching at SUFE is designed to help students meet the goals of the Chinese “College English Curriculum Requirement”. We also hope that it will achieve the intended outcomes of the large-scale teaching experiments of the Chinese Ministry of Education. Our intention has been to encourage students to identify their own learning objectives, to participate actively in classroom activities and to fully engage with the intentions of the “College English Curriculum Requirement”. We believe that if students are able to do that they will fulfill their own educational needs and the intentions of the teaching staff. Furthermore, they will no longer be completely dependent on teachers to direct their learning. Instead they will regard themselves as capable learners who can shape their own path, who can create their own learning plan and develop a set of criteria that will stand them in good stead as lifelong learners.

3.2 An explanation of the learner autonomy model using ICT at SUFE

The learner autonomy model which uses ICT is based on a constructivist learning theory approach.
Constructivism has been applied to sociology and anthropology, as well as cognitive psychology and education. Perhaps the first constructivist philosopher was Giambatista Vico who commented, in a treatise in 1710, that "one only knows something if one can explain it" (Yager, 1991: p. 14). Immanual Kant argued that human learners are not simply passive recipients of information. Rather, he maintained that learners actively take knowledge, connect it to previously assimilated knowledge and make it theirs by constructing their own interpretation of it (Cheek, 1992).

According to constructivist learning theory, competent language learners do not simply accept the linguistic ‘hand-me-downs’ of others. Instead they must be understood as creative designers of their own language structures, they need to be acknowledged as weavers of language structures that suit their own unique purposes. The confident, competent language user will construct knowledge about the language by drawing on their own cognitive structures and, by defining problems themselves, they are able to produce hypotheses, confirm or disprove their hypotheses and solve problems, and thus find new problems.

The new teaching model is student-centered because it makes students take control of their own learning process in the new teaching model structured as a three stage process. The first stage requires students to learn before class; the second is classroom teaching; and the third is autonomous learning after class. During each of the three stages, teachers and students work together to identify teaching objectives, choose teaching content and design teaching activities as shown in Figure 1.

The curriculum is differentiated because it allows students to choose from the content and learning methods and they are able devise processes to assess their own learning outcomes. Additionally, at the commencement of the process, the teacher guides students to set up learning groups in which teachers and students define learning objectives for each unit. Another unique feature of the process is that teachers and learners work together to design teaching activities. In this way students’ initiative and enthusiasm are aroused and maintained. Students not only take an active part in classroom activities but also take an active part in identifying learning objectives and designing classroom activities.

Learning before class (Stage 1) is an important part of the program, making quite different demands on the student than those required in previewing material before class. The concept of learning before class requires students to identify definite personal goals of learning, study some content alone, and finishing objective testing. Thus, learning before class is an important step in cultivating students’ autonomous learning ability. The preview process requires that students look at the text to gain a general sense of the content before the teacher talks about it in detail in class.

Thus, students, on the basis of their individual requirements, consult the information in the different stages to gain language knowledge such as vocabulary, grammar, discourse and rhetoric. Communicative competencies, such as cultural customs, communicative conventions and conversation strategies and information materials, are readily available to solve problems in their study (Kang Shumin & Wang Xuemei, 2003). This work functions to help students make use of the materials and to help them to actively engage with the teachers’ classroom activities in Stage 2.

| Stage 1: Learning before class | Stage 2: Classroom learning | Stage3: Learning after class |
In the case of the outside-class (Stage 3), students can, by using ICT engage in online-talk with people all over the world. Thus, students can use the target language accurately and naturally to develop their communicative skills and intercultural communication competence. Alternatively, students can also use World-Wide-Web to collect plenty of language knowledge and culture materials concerning the target language and enlarge their knowledge and cultivate their multi-angle view, their three-dimensional ways of thinking about the world. As Hu and Gao (1997:78) have argued: “The product of foreign language learning is not only the improvement of language communicative competence but it also opens up mental activity, reconstructs value concepts and reshapes personality”. These ideas are at the very core of those embodied in the optimization of learner autonomy.

4. The Experiment at Shanxi University of Finance and Economics (SUFE)

The investigation was designed and organized by SUFE to examine the effectiveness of the learner autonomy model of TEFL using ICT.

4.1 Hypothesis

The process of developing a new model of College English teaching, the learner autonomy model using ICT, will arouse students’ interest, motivation and learning initiative, improve students’ learning effectiveness and develop students’ autonomous learning capacity.

4.2 Aims and objectives of the experiment

The primary objective of the nationally recommended college English teaching reforms at SUFE was to improve students’ English language comprehension and application competence. This reform agenda resulted in the development of a new teaching model that was tried in an experimental program that began in September 2004. Students in the experimental group were moved away from teacher dependency to a situation in which they were made aware of the desirability of becoming autonomous learners, and they learned that they could develop a high level of competence in listening and speaking as a result of their efforts.

4.3 Research approach: Contrastive investigation

The research program at SUFE was the responsibility of the College English Reform Group who
designed a contrastive teaching experiment which set out to achieve the goals of the “College English Curriculum Requirement” (Chinese Ministry of Education) and the teaching objectives of the university. They did this by arranging the rate of teaching progress; confirming the methods of assessment and examination; establishing the teacher management system; training teachers in web-teaching and hyper-text overhead making; offering guidance in small group management and supervision of class-delivery of content by teachers.

After the students of Grade of 2004 entered the university, they attended the first graded test. Based on the results of the overall grades (60% for the test results and 40% for the results of National Matriculation English Test), students were divided into two-level classes (Classes A and B). Three classes A, and six classes B, were selected for the experiment in order to put the new teaching model into practice. There were 500 undergraduate students taking a major in English, with three teachers involved in their instruction during the experimental period at SUFE.

The teaching approach in the experimental classes was one in which teachers combining face to face classes (reading and writing course) with students’ autonomous learning sessions using the ICT network (Online Learning Unit). Thus, they were listening and speaking training in small groups (Listening and Speaking Unit).

The teaching ratio during face-to-face teaching, autonomous learning, and listening and speaking was 2:1:1 (see Figure 2).

Figure 2: Experimental classes – learning activities and equivalent hours per week

<table>
<thead>
<tr>
<th>2 hours – face-to-face</th>
<th>1 hour – autonomous learning</th>
<th>1 hour – listening &amp; speaking</th>
</tr>
</thead>
<tbody>
<tr>
<td>• in ICT-assisted classroom</td>
<td>• on-line at computer centre</td>
<td>• in small groups</td>
</tr>
<tr>
<td>• 3 regular-size classes combined into 1 large-size class</td>
<td>• with teacher-assistance initially</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• activities, e.g., self-practice, checking teacher’s on-line explanations (sub-total 16 hours)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• plus 60 hours “free” additional access (total 76 hours access for experimental classes only)</td>
<td></td>
</tr>
</tbody>
</table>

During the year, Experimental Classes and Non-experimental classes were required to study the New Horizon College English-Reading and Writing course. The course materials comprise a textbook with web-based teaching software produced by the Foreign Language Teaching and Research Press and sponsored by the Chinese Ministry of Education. Figure 3 presents an outline of the patterns of study for both class types.

Figure 3: Experimental and Non-experimental classes – patterns of study

<table>
<thead>
<tr>
<th>Class</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
<th>Term 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>NHCE • vol. 1 - independent learning</td>
<td>• vol. 2-4 - learning with assistance</td>
<td>vol. 5 attend CET 6 if CET 4 passed</td>
<td></td>
</tr>
<tr>
<td>Non-experimental</td>
<td>NHCE • vol. 1-4</td>
<td>attend CET 4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.4. Assessment Methodology

As the new model progressed it became clear that the processes of teaching assessment needed to change. It was also recognized that the previous assessment approach, in which students’ grades determined by end-term course examination, combined with casual observations of students’ in-
class learning processes, was a less than adequate form of understanding the teaching process and teaching management. It became clear that if the curriculum objectives at SUFE were to be met, it was important to establish a rigorous, objective, and accurate assessment system. Staff considered that it was important for teachers to gain feedback from students if they were to improve their teaching management and guarantee the teaching quality. There was also an understanding that the thought processes necessary for written feedback from students might prove to be the most effective means for students to adjust their learning strategies, improve their learning methods, and raise learning effectiveness.

The new formative assessment policy of the teaching/learning process took into consideration three aspects of student activity. These are students’ self-assessment, students’ assessment of each other and the teacher’s assessment of students. The teacher of each class had the responsibility of coordinating the process of students’ self-assessment and students’ assessment of each other. The results from these assessments served as 5% of the overall term grades respectively. The teacher of each class also assessed the students’ performance in listening, speaking, reading, writing and translating in class and outside class. The results of this anecdotal record formed another 10% of the overall term grades. The computer automatically recorded the hours of students’ study on computers. At the end of term students’ computer interactions formed 20% of overall term grades.

Final assessment refers to the end of course examination and the level examination. The final course examination consisted of a written test and an oral test. The examination content of the experimental classes had the same content as those of the non-experimental classes. However, the results of the final course examination and the results of the level examination were, respectively 50% and 10%, of the overall term grades. At the end of the term the Foreign Language Faculty of SUFE compares the teaching results of the experimental classes and those of the non-experimental classes. A detailed analytic report concerning the two teaching models is then completed.

5. How SUFE has worked to optimize the learner autonomy model with ICT

At SUFE our goal has been to create and encourage our students to become independent and successful learners. In the light of second language acquisition theory, we have made every effort to cultivate learners’ self-confidence because we believe confidence is of critical importance to a person engaged in the development of new and challenging activities. People with no confidence will generally not succeed, and so our learners have been encouraged to challenge the aura of mystique around the teacher and take the social risk of treating them as ordinary humans. According to Dickinson, learner-centered education is clearly about learning how to learn: “The concept of learning how to learn seems to be a very simple matter. But for teachers, there is a lot to do behind the scene” (Li Ming, 1999:11).

Primary, amongst those tasks that are so necessary for teachers ‘behind the scene’ is getting to know the students. In order to be effective, the teacher needs a clear picture of each student’s learning capabilities, because, if teachers do not know their student’s actual learning abilities, level and background, no matter how good their intentions, their aimless instruction will miss the point (Yang & Zhao, 1989). If there is one aspect of teaching that will help to raise the efficiency of one’s teaching it is to know one’s students well, know what they are lacking, and have the knowledge to help them. Here at SUFE we have set out to assist the teachers in this process by surveying the students. At first class meetings each student received a seven-point questionnaire about their educational background, their present competence of English listening, their personal impression of their abilities in speaking, reading and writing, and some information about their personal interests.
The Faculty carried out level-based teaching matched to the students’ capability and focused on individual development. All language learners need are different in terms of their personal needs, interests, strengths and weaknesses, motivations, learning styles; and they need the opportunity to find their place in the curriculum. Thus the ability of ICT as a flexible self-study resource has proved extremely useful in suiting these learner differences. As Keck and Kinney (2005: p. 12) explain, “A committed educator not only accepts students’ differences but also acts on them by differentiating his or her instructional practices”. We found that learners needing help were able to focus on language areas, and importantly, they were able to ignore others. Students could take their own time, and could exploit whichever variety of media was on offer; and they chose what they preferred to learn. They worked at their own pace, and they used any off-line media that they might select. The vast repositories of multimedia make it more likely that material of particular topic interest will be available to them.

Level-based teaching requires individuals to make their own decisions about which tasks to do. In this new climate of autonomy the teacher provided different worksheets to different individuals, depending upon their tastes and abilities. The teachers encouraged students to pick what to read or hear, especially when there were concerns about the student’s capabilities. Thus students operating at different levels of English proficiency were given different learning requirements.

Teachers arranged classroom activities for the students at different language levels of competence. For example, the goals of learning dialogues and texts were to apply language to real life. Students whose language ability was weaker were required to do some recitation of the text, thus increasing their language quality and gaining an instinctive feel for the flow of the language. The students, who did have sound basic knowledge, did have the ability to sum up, to arrange, and to reorganize the materials, and therefore they were required to retell the text. In this way students were able to carry out individualized learning and individualized development so that they became better placed to meet the varying requirements of the work place.

At SUFE we have structured the learning environment to help students develop their own learning objectives and we have done this by helping them to actively plan and arrange their study. By studying College English Curriculum Requirements, students have come to know their overall English needs while at university. Thus, students have adjusted and planned their detailed learning goals according to their individual situations. For example, a student who would like to do translating work might consider translation skills and knowledge as crucial for his future development, however, “College English Curriculum Requirement” emphasises listening and speaking. In this case the student would adjust the study plan to improve translation skills.

Cultivating students’ autonomous learning skills, especially their capacity to convey spoken information is one of the important aspects addressed by the ICT. Students first need to learn to master the application of modern information technology and operative techniques. Secondly, students then need to master the practice of making good use of information. Our students were encouraged to develop their ability to get and collect information, analyze, integrate, synthesize and evaluate the information obtained. Once students selected appropriate learning materials and had taken up an effective learning methodology they were well on the way to becoming autonomous learners with many transferable ICT skills.

Psychologically students have the right to make choices with regard to their learning. Therefore, independence in learning is vital for students to function effectively in these new times, thus the development of metacognition skills is an absolute necessity. Wenden (1985) has shown that strategic learning, particularly in metacognitive strategies, are a key point for promoting learner autonomy. When students are capable of identifying helpful language elements and adapting corresponding strategies, they can more easily and effectively realize their goals.
Students were encouraged to record their learning process with introspective/self-searching methods. In this process students regularly wrote about their learning experiences in a learning log, identifying their successes and failures, and analyzing their actions. As students made progress in this technique the teacher helped them to analyze their work and made appropriate suggestions. This method of reflection proved particularly beneficial for students and helped them by increasing their knowledge of their own learning strategies. Furthermore, students came to understand the value of assessing their learning goals and outcomes. As Wenden (1998) has suggested: “Without such a realization learners may stay in their original conceptive and action model so that they will never become real autonomous learners” (p. 32).

The teaching staff, too, needed to develop effective monitoring and control mechanisms and carry out accurate, objective evaluation in order to encourage students to become fully autonomous learners. During the process of evaluation teachers strove to acknowledge and identify the academic achievements of their students and give them positive encouragement. Despite the fact that the students were becoming more mature they were still influenced by the level of their results and we found that they were given confidence by positive feedback from staff.

The content of assessment should include information about students’ basic knowledge, their skills and attitude towards study, comments on their study habits, their capacity to cooperate with others and their interpersonal communication ability. Every opportunity was given to students to evaluating their own learning proficiency, as they gained feedback from their test results, teachers’ comments, and from fellow students’ assessments. However, it proved insufficient to simply rely on others. Students also needed to develop the ability to self-monitor, control and make assessments of their own learning achievements. The process of self-evaluation may involve the use of others’ examination responses as a means of comparison or engaging in web-based test sites which encouraged students to develop their own tests. When students were able to regularly evaluate their own work they were able to recognize and understand their own progress, which, in turn, allowed them to adjust their learning methods and to design new objectives for learning.

The staffs at SUFE have set out to encourage students to creatively apply what they have learned in order to explore the content of the course and solve new problems as they encounter them. In the process of learning, students got to know their own language capabilities and their own language learning processes. They come to recognize new problems and, eventually, find a theoretical basis for their learning that helped them systematically solve learning problems as they appeared.

6. The new and differentiated roles of teachers and students

If autonomous learning is to succeed, teachers have to be prepared to accept their new roles in classrooms. Voller (1997) identifies three roles for teachers working on an autonomous pedagogy:

- the teacher as facilitator;
- the teacher as counsellor, and
- the teacher as resource.

If the classroom is a stage in theatre, the students are the actors. Students become active constructors of knowledge through experience and opportunities to discover and enquire. This implies students are co-learners, using available knowledge through interaction with others in socially significant tasks of collaborative work.

From the very beginning of the investigation, the roles of teachers and students were made clear to
the students. Teachers must first provide students with appropriate tools and with opportunities to practice using them, i.e., teachers have to facilitate the change. The presupposition here is that teachers are willing to change and shift their roles in the classroom from information providers to facilitators, shifting from ‘teaching knowledge-based’ to ‘supervising students learning-based’, from ‘a protagonist’ on the stage to ‘a director’ behind the scenes; thus becoming the students’ director of knowledge-construction.

When working with multimedia software the role of the teacher as ‘authority source’ and ‘expert’ changes to a transformative role, in which he/she becomes an active participant in the learning process or as an observer (Warschauer, 1998). Hence, the teacher does not dominate the floor or do most of the talking. Neither does the teacher direct and redirect the development of the topic, nor pose display questions, nominate students as next speakers, or even pass evaluation on individual student's contributions, as is the norm in traditional teacher dominated EFL classrooms. The full range of electronic media provides access to many different and changing situations that require teachers to become both flexible and creative.

We found that when teachers value the electronic technology as a resource for improving learning, and not just as a means for increasing productivity, they recognize the importance of changing the role of teachers, learners, and even the learning process itself. The transformation to student-centered classrooms marks a new role for the teacher as a facilitator. As both teachers and facilitators, staff help students construct their own meaning; technology provides them with new ways of teaching and enhancing learning opportunities for students (Padrón & Waxman, 1996). Thus, when teachers act as facilitators helping students to actively interpret and organize the information, teachers also find they are encouraging students to find where the new information fits into their knowledge (Dole, et al., 1991). Consequently, students have become active participants in learning and are encouraged to explore and create language, rather than being passive recipients of it (Brown, 1991).

7. Preliminary Findings of the 2004 Experiment at SUFE

When the first term of the experimental study was concluded, an investigation was conducted involving 550 students in the experimental classes. Analysis of the investigation identified the progress of students using the New Horizon College English. From classroom observations, questionnaire responses and interviews with the students, a range of impressions of the teaching experiments were gained from the students.

7.1 Some teaching outcomes of the New Horizon College English

Most students demonstrated satisfaction with the presentation of New Horizon College English. Indeed, the newly designed course appeared to have played an important part in the development of their English language skills. The new multi-media form of engagement with the target language took the place of the traditional model. A change in the task of previewing and offering critique of texts demonstrated an example of the new approach. In the traditional teaching mode, when students were highly dependent on teachers, they believed that the more the teacher talked the more they would begin to understand. They did not expect to be asked for their own opinion. However, during the course of the research at SUFE, it was found that most students had developed the habit of previewing texts before class. As a result, the teachers moved beyond the teaching model of simply talking about language points and they paid more attention to explanations of key points that caused difficulty. The teachers found that they had the capacity to strengthen students’ English language technical training.
In the case of the teaching content of the new curriculum, the documentation provided with the package presented methods of teaching that were lively and interesting. The PowerPoint Presentations were well designed and convenient for teachers to operate. The study materials engaged students in a considerable variety of societal aspects of language use and there were plenty of materials to choose from. This capacity for choice allowed students to study English from a range of discipline vantage points. Indeed, the curriculum package provided teachers with the opportunity to immerse the students in a range of autonomous learning situation.

Teachers who implemented the new curriculum no longer needed to explain everything about the text, as they had previously. The new curriculum proved to be an efficient tool for the process of developing students’ application of English technology. For example, in the reading and writing class, the teacher who wished to take reading techniques as a special topic found that the curriculum material was plentiful and detailed, with ample scope for students to engage in studying areas of personal interest. Such opportunities did not exist in the traditional university classroom.

Audio and visual files were closely connected to the texts so that they attracted students’ attention and helped to make the classroom atmosphere more animated. The new curriculum package provided an ongoing, developmental approach to vocabulary development, with the content of texts explained by English native speakers.

There was considerable variety in the form and structure of the materials, including listening, speaking and reading, writing and translating. Moreover, there were many situations when hypertexts that was simple to operate, provided ongoing challenge and added interest to the materials. New vocabulary and common expressions were explained in great detail with typical, appropriate sentence examples given in lifelike situations.

However, there were still two aspects that needed improving. One was the need for further developments to enrich the curriculum content. For example there was a need for the analysis of some of the long and difficult sentences that were necessary to the text but which provided a challenge for the students. The other aspect that needed improving was the need for a “minimum functional level of competence”, that would allow greater ease of access for students who had a limited exposure to the electronic media.

7.2 The reading and writing course needs improving

The reading and writing course was designed to pass on essential English knowledge, and focuses on the development of students’ technical application. In the Multi-media reading and writing course, electronic slide shows took the place of the blackboard. Students were able to learn far more than they were able to do when using the traditional classroom model, and the information appears to have become more deeply learned by the students who were not simply rote learning. In the course of the teacher’s delivery, the teacher combined reading and writing together, and as a result, students learned what they wanted to learn in the English classroom, more effectively and efficiently.

By contrast, the approximately 165 students of the three natural classes (traditional classes) were put together in a classroom to have a combined class for two hours once each week. Because there were too many students crowded into the classroom a number of students were seated at the back of the classroom, from where they were unable to clearly see the words on the screen, and that did affect the students’ leaning outcomes. Due to the large number of students in the room, those who were most distant from students answering questions were unable to hear answers. Commonly the teacher had to repeat the question and the answer – clearly a waste of time. The large class size also
inhibited contact between the teacher and students in such a way that the classroom atmosphere was not lively, and students felt constrained by the need to keep silent so that any interchange could be heard. However, some students did speak to each other, thus creating an undercurrent of sound that made listening difficult for students and teacher alike.

Many students complained about the inadequacy of the large class size of the interactions that did occur between the teacher and students, saying that they were not sufficient to produce beneficial results. Without adequate communication there were few meaningful language exchanges, ideas were seldom conveyed and there was little by way of language development. It became evident by its absence that language interaction was a crucial aspect of instruction.

7.3 The students welcomed the listening and speaking course

The listening and speaking phase of the New Horizon College English course concentrated on students’ English language techniques training, and, at the same time, it devoted time to exercises based on the content of the reading and writing courses. It provided interesting viewing, listening and speaking materials involving many aspects of society with new and challenging contents that lay stress on the key points.

The obvious advantage of the course was that it connected what was learned in the reading and writing courses to the content of listening and speaking instruction. It combined language input and language output together closely, so that it avoided the situation in which there was far more input and less output, as in the traditional teaching, and it avoided the separation of language input from language output. The program integrated language learning by making connections with salient aspects of other discipline areas. It not only improved students’ listening and speaking competence but also consolidated what was learned in the reading and writing course. Consequently it helped students to apply what they learned in practice. Through listening and speaking training, students felt that their listening and speaking abilities had been improved and they believed that their English pronunciation has been developed considerably during the previous term.

However, in order to improve the course two aspects needed to be taken into consideration. The first was to strengthen listening techniques, to design more classroom activities and enrich the format of the exercises that were used in the activities. The second was to raise the level of interaction between the teacher and students, giving more guidance to students’ oral English and listening ability and the correction of individual students’ mistakes.

7.4 Problems with the online English course

The online English course did provide students with detailed materials with which to preview lessons before class. Indeed, the new words and expressions in the texts were explained clearly, with many examples of typical sentences. The online course also made the memorization of material easy for students who were able to adjust their learning time and learning content according to their individual situations. It was also a useful means of cultivating students’ autonomous learning outside the classroom.

However, more than 90% students complained that the biggest problem with the online English course was that of teaching facilities. The computers that students used in the computer laboratory could not meet the needs of the online English course teaching. Firstly, it took students a long time to go through a complicated process before entering the online site – which wasted time. Secondly, the computers were frequently in poor condition. In every class hour there were always a couple of machines out of action. Thirdly, there were not enough computers for students to use; it was not at all unusual for a few students to leave the computer room without completing their classes. Fourthly, the online speed in the computer room was painfully slow in opening even the smallest
Fifthly, all too often the earphones on the computers were defective. Students were unable to hear the sound from the network. This litany of complaints meant that the Online English course did not work well. Unsurprisingly, many students lost interest in attending classes. Replacing the old technology became a priority.

8. Conclusion and Discussion

By making the classroom observations of groups A1 and B1 run across two years, it was found that most of students could take charge of their own learning. Students’ motivation to study was aroused and most of them volunteered to find appropriate reading materials and to persist in listening to the radio station in their spare time every day. They were able to take an active part in all kinds of activities outside class, such as English speech contests, engage with the English corner and take part in English singing contests at the university.

A negative aspect of the research was that our observations have shown that students’ ability to focus their study was often weak. Teaching through ICT, while it dramatically expanded the study opportunities available to students, also required a considerable personal discipline on the part of students to select relevant material and to restrain themselves from engaging in amusing but trivial content. Failure to focus well did result in some students using their time inefficiently, with less than satisfactory outcomes the result. Therefore teachers recognized the need to pay more attention to guiding to students in order to improve their learning effectiveness.

Both the teaching staff and the students felt that class hours were insufficient, especially for the reading and writing course in which there is a considerable amount of content for students to master. With the limited periods of class hours each week, the teacher could only choose to talk about key points of the text. The teachers felt that they had little time to talk about what they wanted to explain to the students, and they had very little time for direct interaction with the students.

The teaching facilities of the experimental classes were sometimes inadequate for the demands of the technology required for teaching the new program in the experimental classes. Such deficiency did prevent the experiments from being maximized effectively. The experimental program required better teaching facilities but, because there was insufficient financial support, the restricted teaching conditions did impact negatively on students’ learning outcomes.

All three courses had their own features and their own key points and, while the three courses did connect with each other they formed an effective, integrated whole. They formed a multi-layered, embracing unity of all aspects of a scientific teaching system in which the teachers’ role was reinforced. Most important of all, teachers needed to play an active role in the development of courses and thereby gain first hand knowledge of the course intentions. That is to say, teachers needed to move forward from the single role as the purveyors of knowledge, to the multi-faceted role as course designers, deliverers and implementers in a variety of different teaching settings.

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