

# *Oral English Teaching Aided by ICT from the Perspective of Educational Ecology*

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**Abstract**—This paper explores the factors that influence an oral English class aided by ICT from the perspective of educational ecology, and then it discusses the foundations and strategies to establish a balanced class ecological system of an oral English class with ICT. Based on the findings of a questionnaire investigation, it concludes some suggestions as follows. First, the oral English class aided by ICT should create an ecological structure of mutual symbiosis and correlative dependence for students. To maintain the ecological balance in class, human factors and environment factors should be paid special attention to. Secondly, both the teachers' and students' application ability of ICT should be improved, and students should learn to cooperate with classmates in learning. Thirdly, the university should establish a reliable online learning platform and create constructive cultural environment for students' learning. Finally, a strict class management system should be established to ensure the efficient class teaching.

**Keywords**—*educational ecology; oral English teaching; ICT; class ecological system; class environment*

## I. INTRODUCTION

The fast development of information communication technology (ICT) has great impact on education and learning modes, and changes the relationship between teachers and students, providing huge development space for education. The Curriculum Teaching Requirements of College English, issued by the Education Ministry, specifies the significance of oral English teaching in the whole college English curriculum and the significance of the application of information communication technology in teaching. It points out the direction of future development of college English teaching—individualized learning and autonomous learning.

According to the theories in ecology of education, every element in the ecological environment correlates and influences with each other. The application of ICT in oral English teaching can facilitate the teaching process in classroom, but also may pose as a nuisance to both teachers and students if not properly utilized.

This paper intends to discuss how to apply ICT in oral

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English teaching from the perspective of educational ecology, and tries to investigate the feasibility of this teaching method based on a questionnaire investigation.

## II. EDUCATIONAL ECOLOGY AND TEACHING

### A. Educational Ecology

Education is an integrated ecological system in which each element in educational environment influences and correlates with each other. According to Cremin (1976), educational ecology is a subject that comprehensively analyzes each element and the relationship and function between each element from the perspective of the whole teaching ecological system [1]. Educational ecology emphasizes the multichannel approach and diversity of the teaching process. Elements in the teaching ecological system, such as teaching content, teaching objectives, teaching media, etc., correlate with each other and gradually develop and expand. There is diversity in the curriculum level structure, category structure and education management system structure. There is complexity and uncertainty in the teaching context, which caters to the personalized learning and socialized development of learners. There are also other educational elements, such as the learning content, learning style, learning media, etc., which continuously correlate with each other, gradually develop and lead to dynamic character and complexity of the whole teaching process.

The perspective of educational ecology is to analyze the specific paradigm or schema of educational phenomena produced in the educational ecological system. It focuses on the research of educational ecology which covers the topics of individual and environment, heredity and variation, balance and unbalance, symbiosis and competition etc. Educational ecological phenomena therefore usually involves educational ecological activities, educational ecological system and environment. Educational ecological environment, including psychological environment, geographic environment, physical environment, etc., refers to multiple environmental system that restricts and controls the generation, existence and development of education. The research category of educational ecology can be defined as research on educational ecological phenomena, ecological system and educational environment to reveal the interactive mechanism and the

harmonious development law between education and environment.

### *B. Factors Influencing the Oral Class Ecological System*

According to Rapport (1989), a healthy ecological system is a system that is steady and sustainable and has the ability to maintain its organization structure, conduct self adjustment and recover from threat [2]. Costanza and Mageau (1999) pointed out that a healthy ecological system could maintain its structure and function even facing with outside threat [3]. A class ecological system may be influenced by many factors, mainly including the systematic internal ecological function factors and the systematic external ecological function factors. The internal factors focus on the cultivation of students, and they refer to the influencing factors of teaching methods, teaching process, teaching effects, etc. The external factors refer to the social influencing factors of social value, learning motivation, literal level, cultural background, etc.

The ecological system of an oral English class aided by ICT is mainly influenced the human factor and the classroom environment factor. The human factor refers to the teacher and students, including the teacher-student relationship, student-student relationship, the attitudes between the teacher and students, etc. The classroom environment factor refers to the facilities in the classroom, the teaching media, the classroom regulations, etc. All these factors can play a role in the classroom teaching, and lead to the balance or unbalance in the class.

Accordingly, there are problems that impede the development of ICT application in the class. First, teachers cannot properly apply ICT into teaching, and there is usually under-use, overuse or abuse of ICT in teaching. Secondly, the ICT facilities in the classroom are insufficient and obsolete. Because of lack in fund, the configuration of ICT equipment in many universities is outdated and the software cannot satisfy the teaching needs.

The application of ICT in oral English class can cause a disturbance in the classroom ecological balance. There is proportion change in the class composition. The proportion of ICT usage may increase and the proportion of the teacher's teaching may decrease. There will be unbalance in the teaching methods, teaching content, teaching evaluation, and teaching management with ICT, and the traditional role of a teacher and students will change. The use of ICT will be a failure if there is any deficiency in the whole teaching process. If the teacher cannot adapt to the new teaching method with ICT, or if the students cannot carry out autonomous learning, or if the proportion of each teaching activity is improper, there will unbalance in the classroom ecological system.

### III. ESTABLISHMENT OF A PROPER ORAL CLASS ECOLOGICAL SYSTEM

In order to solve the problem of unbalance in oral English class ecological system, adjustments should be made to the present teaching model to establish a balanced class ecological system in which every element can work and coordinate with each other harmoniously. Measures should be taken to pursue

the sustainable development of the class ecological system, and achieve a dynamic balance with the development of ICT.

### *A. Implementation Foundation*

The establishment of a proper oral class ecological system should prepare a firm foundation that can ensure the efficiency of ICT application.

First, there should be a career development training centre for teachers. In this training centre, teachers can learn how to apply ICT to class teaching and can also learn the advanced education technology. This training centre can offer help for teachers when teachers meet problems in their class teaching with ICT.

Secondly, university administrators and teachers should establish a constructive cultural ecological system in the university. Students should be educated to pursue the truth actively and be willing to cooperate with each other.

Thirdly, the ICT platform should be established to ensure the teaching and learning. On this platform, students can conveniently get access to the course resources, and teachers can monitor and trace students' learning activities.

Finally, the oral English class should create an ecological structure of mutual symbiosis and correlative dependence for students. The oral English class is highly interactive and an ecological system full of vigor and competition. There should be a motivating system to spur students' learning interest and passion. Teachers should set class rules and adopt proper teaching methods to attract students' to show their learning potential and keep a balance in the class. In such a class ecological system, the implementation of collaborative learning, autonomous learning and exploratory learning will promote the relationship between teachers and students and also promote the relationship among different students. In such a process, students can establish a benign class ecological system.

### *B. Implementation Strategies*

Based on the previous foundation and the language curriculum design principles by Nation and Macalister (2010), the establishment of a constructive oral class ecological system can abide by the following strategies: to form a brand-new teaching concept among teachers, to create a multidimensional interaction teaching environment, to implement a multivariate evaluation system, to improve teachers' and students' ability of ICT application, to establish a harmonious relationship between students and teachers, and to implement stratified teaching according to students' language level [4].

First, when carrying out oral English teaching with ICT, teachers should change their traditional teaching concept, and adopt new perspective of teaching. Borg's research (2003) has recognized the impact of teachers' beliefs on their teaching practices [5]. According to Chen and Goh (2011), how teachers think and understand teaching is assumed to shape their classroom behaviour and guide the goal setting [6]. The leading role of a class should be changed from the teacher to students. The teacher's role is to inspire and monitor students to learn. The teachers should teach students how to learn instead of directly telling them all the knowledge and keys. Students'

learning style should be changed from passive accepting to active exploring. Students can use ICT tools and the learning platform to carry out their own personalized learning and autonomous learning without the limit of time and place.

Secondly, the teacher should create a multidimensional interaction teaching environment which can facilitate the balance of an oral class ecological system. According to Leather and Dam (2003), language acquisition mainly relies on the interaction between the language learners and the environment, including the interaction with space, society and culture [7]. The class interaction includes the interaction between the teacher and an individual student, the interaction between the teacher and student groups, the interaction between an individual student and another individual student, and finally the interaction among different student groups. The more these different kinds of interaction are, the steadier the class ecological system is. With the aid of ICT tools, it is feasible to achieve different kinds of interaction.

Thirdly, the teacher should set a multivariate evaluation system, including the formative assessment and final assessment, to guide students' learning behaviour and stimulate students' learning enthusiasm. The formative assessment contains the students' self-assessment, the mutual assessment among students or peer assessment, and the teacher's assessment of the students. The final assessment refers to the final examination. These evaluation measures will objectively record and reflect students' performance and provide effective feedback to the students to make them improve.

Fourthly, teachers' and students' ability of ICT application should be improved to ensure the class can be carried out smoothly. The poor ability of ICT application of the teacher and students can undermine students' learning interest and efficiency.

Fifthly, a harmonious relationship between students and teachers should be established with the class ecological system. A benign teacher-student relationship, which can reduce students' learning anxiety, is the direct drive of students' learning enthusiasm, and it is the essence to maintain the balance of the class ecological system.

Finally, the teacher should implement stratified teaching according to students' language level. There is great variation of students' English language levels that cannot be ignored in the teaching. Students of different language levels have different needs in the learning process, so the oral English class should be classified into different levels according to students' levels. There should be different learning content, activities, and tasks designed for different levels both in the class and on the learning platform.

#### IV. METHODOLOGY

An investigation was conducted in this research to examine students' attitudes and thoughts of the oral English teaching aided by ICT.

##### A. Investigation Subjects

All the subjects were sophomore students from the same university in Wuhan in China. These students studied oral

English course with ICT for a year, and in total there were 132 students randomly selected as the investigation subjects.

They were investigated at the same time with the same questionnaire. The questionnaires were collected back immediately after all the students finished answering all the investigation items. There were 128 valid questionnaires.

##### B. Research Questions

In this research, a questionnaire was designed to investigate the students' attitudes and thoughts about the oral English teaching aided by ICT. In the questionnaire, the following research questions were asked for students' opinions:

- (1) What do you want to learn in this oral English class?
- (2) Is it convenient for you to use ICT tools for this oral English course?
- (3) Do you need training for the application of ICT tools?
- (4) Do you make enough oral practice in class?
- (5) Do you make enough oral practice online?
- (6) Are you satisfied with the present relationship with your group members and partners in the oral English course?
- (7) How do you treat competition in class?
- (8) How much proportion of ICT using in class is suitable?
- (9) What do you worry most in such a teaching model?
- (10) What is the defect of the present oral English teaching aided by ICT?

##### C. Results and Findings

Based on the results of 128 valid questionnaires, the following findings were concluded.

As for the first question, 40.6% of the investigation subjects said they wanted to learn the oral English expressions. 26.6% of them said they wanted to learn the oral communicative skills. 24.2% of them said they wanted to learn the different cultures, and the rest 8.6% of them said they didn't know what to learn.

The result for the second question was that 56.3% of them said it was convenient for them to use ICT tools for the oral English course. 43.7% of them said it was not convenient.

The result for the third question whether they needed training for the application of ICT tools, 63.3% of them said they needed. 36.7% of them who thought the use of ICT tools was easy said they didn't need.

The result for the fourth question whether they made enough oral practice in class was that 71.1% of them said they didn't make enough oral practice in class. These students also gave their reasons. Some of them said the class time was limited, and some said they were too shy to speak English in class. Still some others said they didn't know how to finish the oral English practice.

When asked the fifth question whether they made enough oral practice online, 66.4% of them said they didn't. Some of them said they didn't have enough time after class to finish the

online oral practice. Some said the online oral practice was boring and useless. Still others said they didn't know how to finish the online practice.

When asked for the sixth question whether they were satisfied with the relationship, 57.8% of them said yes, and 42.2% of them said no. When asked for the reasons for the answer "no", some said it was a waste of time to make oral practice with others and they didn't need it. Some said they didn't know to cooperate with others. Some said it was not quite fair in their groups, and they hated to make oral practice in their group.

When asked for the seventh question how they treated competition in class, 32.8% of them said they would seize very chance to win, and 28.1% of them said they would study harder. 20.3% of them said they didn't care about the competition, and they would do nothing to improve. The rest 18.8% of them said they didn't like competition in class and they didn't adapt themselves to it.

When asked for the eighth question the proper proportion of ICT using in class, 24.2% of them chose the proportion above 75%, and 49.2% of them chose the proportion between 50%-75%. 17.2% of them chose the proportion between 25%-50%, and the rest 9.4% of them chose the proportion below 25%. Some students said they might do things irrelevant to the course with ICT tools if they felt bored in class. Some said they might play online games in class, and couldn't control themselves. Therefore, it might be suitable to cut down the proportion of ICT using in class for these students.

As for the ninth question what they most worry about in this course, some students said they worry they couldn't pass the course. Some said they worry to answer the questions in class because they might give the wrong answer and let other classmates laugh at them. Still others said they worry they couldn't catch up with the whole class.

As for the last question about the defect of present teaching, students give some instructive answers. Some said the defect is that the class management was not very strict and they might not make too much effort on this course. Some said the defect was that they could not always talk with the native speakers. Still some others said the defect was that the use of ICT tools might distract their attention from the class to other irrelevant things online.

#### D. Suggestions

The findings of the questionnaire investigation may give the teachers the following suggestions in the future teaching:

First, before starting an oral English course aided by ICT, the students should be trained to learn how to use the ICT tools properly.

Second, the teacher should monitor students to finish the oral practice both in class and online to make sure most students get enough practice.

Thirdly, students should be educated to learn to cooperate with other classmates and learn how to establish a pleasant cooperative relationship with classmates.

Fourthly, the teacher should try control the degree of competition in class and control the proportion of ICT using in class.

Finally, the class management should be improved and th teacher has to take measures to prevent students from doing things irrelevant to the class online.

#### V. CONCLUSION

From the perspective of educational ecology, the conclusion can be made as follows:

First, the oral English class aided by ICT should create an ecological structure of mutual symbiosis and correlative dependence for students. To maintain the ecological balance in class, human factors and environment factors should be paid special attention to.

Second, both the teachers and students should be trained to master the application of ICT tools.

Thirdly, a reliable online learning platform should be established to ensure students' online learning environment.

Fourthly, the teacher should educate students to establish a cooperative relationship with other classmates and control the degree of competition in class.

Finally, the class management should be improved to ensure students don't do things irrelevant to the class with ICT tools.

Future studies can be conducted on how to design suitable learning tasks online and how to make effective evaluation of online oral English tasks.

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