A Study on the Status Quo and Reconstruction Paths for Ecological Imbalance in College English Classroom under the Background of Informationization – Taking Yunnan Minzu University as an Example

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Abstract- Based on the theory of educational ecology, this paper starts to analyze the status quo of the imbalance in college English classroom of Yunnan Minzu University (YMU) under the background of informationization, attempts to put forward three principles abided in the process of reconstruction, then mainly focuses on the reconstruction paths for the college English classroom ecology, so as to provide some new ideas for the reform in college English, and eventually contributes to the sustainable development of the college English classroom ecology.

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A Study on the Status Quo and Reconstruction Paths for Ecological Imbalance in College English Classroom under the Background of Informationization --Taking Yunnan Minzu University as an Example

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INTRODUCTION

With the rapid development of modern information technology and its application in the field of education, the role of information technology has quietly changed. The way of teaching and learning in the information technology environment has also evolved accordingly. Teacher centered teaching has gradually changed to student-centered teaching. The role of information technology has also changed from being a tool of demonstration and individual counseling to information plus collaboration and communication, cognition and exploration. Blended learning has become a critical teaching model, and the creation of teaching situation has become a means to support effective learning, and the ecological teaching concept has gradually built a new information-based education philosophy.

College English classroom ecosystem is an organic whole composed of teachers, students and teaching environment. After a long period of running in, the system is in a relatively balanced development state. However, with the popularization of network technology and information-based teaching in colleges and universities, it has caused certain impact on the traditional college English classroom ecosystem. As a result, the structure of the classroom ecosystem is unbalanced, and the classroom functions are gradually degraded, which seriously affects the talent training goals of colleges and universities. Taking Yunnan Minzu University (YMU) as an example, this paper analyzes the current situation of ecological imbalance in college English teaching from the following aspects.

a) Imbalance of macro-level factors

Macro-level factors are the important external guarantee and prerequisite for the harmonious and sustainable development of teaching ecology. Among them, factors such as language ecology and curriculum setting play a particularly prominent role in restricting the ecology of college English teaching in ethnic colleges and universities. The details are as follows:

i. The university language ecology is chaotic. As an ethnic university located in the southwest frontier area, the proportion of minority students in our school accounts over 50%. Besides English and Japanese, YMU has opened 15 non-universal languages in 14 South and Southeast Asian countries. At the same time, the school of ethnic culture has opened 13 languages of 12 ethnic minorities in China, which is the school with the largest number of languages offered by similar colleges and universities. The language ecology shows a trend of diversity, but it also brings a lot of trouble to language teaching, especially foreign language teaching.

In the process of college English teaching for many years, the author found that almost all the Han
students are second language learners (Chinese and English), most ethnic minority students are third language learners (ethnic language, Chinese and English), and most ethnic minority students from the school of south and southeast Asia languages are fourth language learners (ethnic language, Chinese, English and professional languages). Han students in the province mostly use dialects to communicate, while minority students mostly use dialects or national languages to communicate. The author found that this phenomenon is also common among teachers. Teachers and students usually use Mandarin only in formal occasions inside and outside campus, such as conferences, classrooms and other places. What’s more, most of their Mandarin is not standard with obvious regional characteristics. The use of English is almost limited to classroom learning.

ii. The setting and arrangement of college English courses are unreasonable. The current curriculum of the university is as follows: college English reading and writing and college English audio-visual and oral courses are offered at the same time in the first year of college, with two classes each week, a total of 16 weeks; Only college English reading and writing are offered in the second year of college, with two weekly classes, a total of 16 weeks. Teachers are allocated according to the number of classes opened in each grade. The maximum number of classes is 60. Students are free to choose classes according to their schedule. As a result, in the same class, students come from different colleges and majors, and their English foundation varies greatly. Teachers cannot teach in full English, and students with poor foundation cannot participate in various classroom teaching activities, which seriously affects the enthusiasm of teachers' teaching and students' learning enthusiasm.

In addition, as a public compulsory course, the university only offers college public English courses. Due to the lack of professional foreign language talents, colleges have been unable to offer professional English courses. The university has certain advantages of bilingual talent resources in school of south and southeast Asian languages, but only a few teachers have offered basic language courses such as college Thai in the form of general education course, and there are no special cross-border languages with ethnic minority languages, such as Vietnamese, Myanmar, Lao and other non common language courses. The advantages of bilingual talents of ethnic minorities have not been brought into play, and the learners of ethnic minority languages are usually recruited from the ethnic minority students.

b) Imbalance of micro-level factors

The micro-level factors of college English cover a wide range of factors. The imbalance of teachers, classroom environment, teaching facilities, and class size in ordinary colleges and universities also exists in ethnic colleges and universities. Therefore, the author will mainly focus on the composition of the special teaching subjects in ethnic colleges and universities, that is, the two ecological factors of teachers and students, to discuss the more prominent ecological imbalance of teaching subjects.

i. The ability and behavior of teachers are unbalanced. As the main body of “teaching", teachers' professional quality, teaching ability, speech and behavior will exert a subtle effect on students' acquisition of professional knowledge and improvement of personality (Guan Jingjing, et al, 2016). However, due to the unified curriculum setting and syllabus plan, teachers' professional skills cannot be brought into full play; The number of classes is large, the level of students varies, and teachers cannot implement targeted teaching strategies. Over time, problems such as teachers' collective lesson preparation, single teaching methods, and monotonous teaching courseware have gradually emerged, which restrict the exertion of teachers' subjective role.

Imbalance between students' habits and environment. As the main body of “learning", students should have shown a diversified development trend, but restricted by factors such as the place of origin and the disparity of learning level, there are generally some unfavorable phenomena such as insufficient learning motivation, single methods and large differences in effects. Most students can not make full use of computers, notebooks and smart phones for study purposes, nor can they make full use of school teaching facilities, such as self-learning platforms, rain classroom, MOOCs, etc., instead, they are addicted to the entertainment function of the equipment. In addition, some students have acquired three or even four languages. The adverse factors of mother tongue or foreign language negative transfer affect the learning efficiency and gradually hinder the cultivation and maintenance of learning enthusiasm.

c) Imbalance between macro-level and micro-level factors

The main body of the ecosystem plays a decisive role in the development of the whole ecosystem, and also restricts the status and relationship between other factors within the system. The imbalance of the ecological subject of college English teaching has led to the dislocation of other ecological factors in the whole system, the virtual existence of the curriculum, the confusion of the classroom environment, the failure to
implement the syllabus and plans, the failure of teaching methods, the failure of teaching facilities to make the best use of everything, the tense relationship between teachers and students, the continuous expansion of distance, the indifference of student relationship, poor communication, and so on.

Although the school has introduced Curriculum Center, Rain Classroom, iTest language testing and training system, Lindge digital voice system and other online course teaching resources, the utilization rate of resources is low and there is a lack of later maintenance. As a result, college English teaching has been limited to the traditional multimedia classroom for a long time. The teaching PPT courseware is stereotyped, lack of new ideas and no pertinence. Some teachers follow the book or fill the hall with books, which does not reflect the role of students as the main body of learning.

II. Principles of Ecological Reconstruction of College English Classroom

To build a good ecological classroom, it is necessary to adhere to the student-oriented, optimize the teaching environment, realize the symbiotic and diversified development of individuals through the virtuous cycle of classroom teaching, and finally make the classroom tend to be a process of harmonious, sustainable and healthy development. In order to better reconstruct the current educational ecology, the paper puts forward the following three principles on the premise of following the basic principles of educational ecology (i.e., the principle of optimum, educational rhythm and overall effect of the ecosystem).

a) Principle of integrity

Due to the structural complexity of the college English classroom ecosystem, the uncertainty in the innovation of English teaching mode, and the risks and crises in the operation of the system, it is difficult to effectively control many elements in the classroom ecosystem (Guan Jingjing, 2016). For example, the policy revision or adjustment of the competent department of education, and the change of staff positions in the college English classroom ecosystem, will all have an impact on the normal operation of the system. Therefore, the principle of integrity should be firmly established, and the reasons for the imbalance of the college English classroom ecosystem should be analyzed through system theory, and isolated and single analysis should be avoided. In this way, the core elements that affect the ecosystem of college English classrooms are discovered.

b) Principle of humanization

The principle of humanization refers to adhering to the student-centered principle, respecting the dominant position of students, guiding students to establish the awareness of autonomous learning and stimulating their enthusiasm for learning English in all links of the reconstruction of the classroom ecosystem. Advocate diversified teaching, fully understand students’ differences and learning habits, allow students to carry out personalized development in English learning, and promote the all-round development of students' mental and cultural quality, so as to form a healthy personality. At the same time, teachers’ self-development cannot be ignored and a good situation of joint promotion between teachers and students can be formed (Qu Weiwei, 2015).

c) Principle of effectiveness

An important starting point of reconstructing the college English classroom ecosystem is to effectively improve the effect of college English teaching and coordinate the relationship between modern information technology and classroom teaching, so as to maintain the balance of the classroom ecosystem and achieve efficient teaching. Therefore, colleges and universities should adhere to the principle of effectiveness, integrate network information resources, and coordinate the elements of the college English classroom ecological environment in order to effectively improve the productivity of classroom teaching when reconstructing the college English classroom ecosystem.

III. The Ecological Reconstruction Paths of College English Classroom

Based on the above-mentioned status quo of college English classroom ecological imbalance in colleges and universities, classroom ecological reconstruction is imperative. This paper holds that the above construction principles should be strictly observed, by giving full play to the leading role of information technology as the leading factor, controlling the limiting factors in the classroom ecology, avoiding the flowerpot effect in the construction of the classroom environment, and restoring the ecological function of the information-based classroom, we can optimize the structure and function of the classroom ecology and promote the restoration of the classroom ecology.

a) Giving full play to the leading role of information technology as the dominant factor

In the process of college English informatization teaching reform, an accurate understanding of the niche of information technology in classroom teaching will help give full play to the leading role of information technology and drive other factors in classroom ecology to adjust their structure and function, so as to restore the imbalance caused by the wide application of information technology in the early stage of reform. Once the dominant position of information technology is established, other ecological factors in classroom...
ecology will inevitably move with it. Teachers and students, as the main body of classroom ecology, will actively change teaching ideas, consciously improve information literacy, actively change teaching methods and actively adjust classroom interaction in order to pursue teaching effectiveness and self-development. The classroom environment and atmosphere as the object of classroom ecology will also change accordingly, classroom rules and regulations will be adjusted accordingly, and the original unbalanced classroom ecology will be gradually repaired.

i. Formulate policies to promote the informatization process of college English teaching. In order to comply with the development trend of educational informatization and meet the internal and external needs of English teaching reform in colleges and universities, the Department of Higher Education of the Ministry of Education issued a series of relevant policies, formulated a series of relevant documents and adopted a series of relevant measures in 2010 to vigorously promote the English teaching reform in colleges and universities based on informatization, broke the "dead" balance of foreign language teaching that has lost its productive vitality, and brought great changes to all aspects of foreign language teaching; At the same time, it also caused great disturbance and imbalance to the classroom ecosystem. In this case, if we continue to vigorously promote the reform of information technology and take corresponding measures, it is expected to make the elements of the classroom form a joint force due to synergy, help the classroom ecology realize mutation in the area far from the balance, gradually form a dissipative structure and realize the new dynamic balance of the teaching system.

ii. Strengthen teaching reform and realize the normalization and deepening of information-based teaching. At present, foreign language teaching informatization has entered a plateau period of relatively slow development and application and concentrated reflection. In the new reform period, in order to realize the sustainable development of foreign language teaching informatization, we must try our best to promote the normalization and deepening of information-based foreign language teaching. Normalization refers to the space-time universality of the application of information technology in teaching, and deepening refers to the organic integration of information technology and foreign language teaching. The integration process gradually infiltrates and internalizes it into foreign language education technology, which fully leads the process of classroom ecological structure and function adjustment, promotes the reconstruction of classroom ecology, and improves the effect, efficiency and benefit of foreign language teaching.

b) Controlling the limiting factors in classroom ecology

According to the law of ecological tolerance, any ecological factor is insufficient or excessive in quantity or quality, that is, when it approaches or reaches the tolerance limit of a certain organism, it will affect or even prevent the survival, growth, reproduction, diffusion and distribution of the species, thus becoming a limiting factor in the ecosystem (Shen Xiansheng, 2012). In classroom ecology, the interaction between various ecological factors is not only affected by other factors in the system, but also affects other factors in turn, and ultimately affects the growth of classroom ecological subjects. When this influence approaches or reaches the tolerance limit of the classroom ecological subject, it will evolve into a limiting factor and destroy the balance and harmony of the classroom ecology. In order to reconstruct the ecological balance of foreign language classroom, we must control the restrictive factors in the classroom ecology.

i. To control the limiting factors in classroom ecology, we should first enhance the awareness of identification, and clarify the real limiting factors by carefully observing the evolution and change of each ecological factor. For example, the time of network self-regulated learning, the network resources, the classroom activities and the use of multimedia courseware should all be appropriate, the information literacy of teachers and students should not be too low, the number of classes should not be too large. Generally speaking, the extreme degree and quantity will evolve this ecological factor into a limiting factor, resulting in some imbalance or imbalance in the system.

ii. To control the limiting factors in classroom ecology, the key is to control the possibility space of classroom ecological factors. Any ecological factor in the classroom ecosystem has a variety of development possibilities, and the collection of various possibilities in this development and change becomes the possibility space. Control believes that all control processes are actually composed of three basic links: what is the possibility space faced by things? Select some states in the possibility space to locate the regulation target; Control some conditions to make things run or transform to the established national standard. Taking online self-regulated learning as an example, some students will fabricate online self-regulated learning. This false learning method will have a great negative impact on students' growth and may become a limiting factor in the classroom ecology. In order to control this phenomenon, we should first analyze the possible space for students' online self-learning fraud. Is it possible to fake their online time, or is it possible for the online subject to fake, or is it possible to fake the answers to online questions?
Then, in view of these possibilities, control some conditions, such as improving the design of teaching platform, enhancing the identity of online learners, setting the preconditions for online recording learning time, and improving the time and method of providing answers.

ii. To control the limiting factors in classroom ecology, we also need to adjust according to the feedback information. The controller believes that both control and adjustment are compensated by correction activities in the opposite direction. Just like driving a car, if it is found that the driving direction is left, it must be corrected to the right, and vice versa. In classroom ecology, the limiting factor that needs to be regulated is the controlled subject, and the ecological subject that implements the regulation behavior is the trial empty subject. On the basis of analyzing the possible space of the controlled subject, the controlling subject controls the controlled subject by limiting certain conditions and obtains feedback information from the controlled subject. If it is positive feedback, it needs further regulation; if it is negative feedback, the regulation plays a role in making the system operation close to the target.

In the process of information-based foreign language classroom teaching, teachers and students should form the good habit of continuous observation and analysis, predict or find limiting factors, and then regulate through analysis and condition control. At the same time, obtain the feedback information after regulation, and judge whether the regulation behavior is effective.

c) Restoring the ecological function of information-based classroom

Any system is the unity of structure and function. A stable structure is conducive to the exertion of system function, and the normal exertion of system function is also conducive to the stability of system structure. Different from the structure, the function of the system is determined by the structure and environment. When the internal or external environment of the system changes, the system structure will be disturbed, and the system function will be weakened or even changed. Information technology has entered the foreign language classroom and developed into the leading environmental factor, which has caused great disturbance to the system structure (Qu Weiwei, 2015). The function of optimizing the structure, tuning the relationship, promoting evolution and ecological education of the classroom ecosystem have been weakened. In order to reconstruct the college English classroom ecology in the information context, it is necessary to adjust the system structure, optimize the system environment and gradually restore the weakened system functions.

i. Using the self-organization ability of the unbalanced system, we can gradually realize the rebalancing of the foreign language classroom ecology and restore the ecological function of the information-based foreign language classroom. System science believes that the system has the ability to spontaneously increase the organization and structural order of the system through its own strength without the intervention or control of the external environment and other external systems. However, to complete the self-organization process, it needs to meet a prerequisite: the system must be an open system far from balance. In order to keep the system away from equilibrium, energy or low entropy material must be continuously input into the system from the external environment, so that the system and its elements are in a dynamic process, and gradually move towards equilibrium after a series of cyclic changes. Under the impact of modern information technology, college English classroom has become a system far from balance. If the investment in software and hardware of foreign language teaching informatization can be sustained, the dominant environmental factor of information technology will eventually pull other components of the system to move towards the bifurcation point in the phase space, form the joint force of the system and enter a relatively balanced state. The process of self-organization and self-regulation is an important mechanism of system evolution. However, this self-organization process is not a gradual and stable process, but an internal brewing, sudden and leap process. The time cost is high, and it generally takes a long time. To solve the imbalance in teaching ecology, it also needs to be supplemented by active control and regulation.

ii. The establishment of classroom ecological restoration mechanism is an important means to realize the ecological rebalancing of foreign language classroom and restore the ecological function of foreign language classroom. The goal of classroom ecological restoration mechanism is to maintain or reconstruct the system structure and function of the ideal state, take the classroom ecological subject as the regulator, and actively regulate these influencing factors according to the characteristics and mode of action of some or some influencing factors in the system. The regulation process generally follows the paradigm of “cognition regulation acquisition feedback re-regulation”. First understand the characteristics and action mode of influencing factors, and then take relevant measures for influencing factors, observe
and obtain the feedback information of the system for regulation, and take further regulation measures. Controlling measures generally include preventive measures and remedial measures. Preventive measures are avoidance measures taken by prediction before system imbalance, and remedial measures are corrective measures taken after system imbalance. Whether the regulation reaches the expected goal depends on the ability of the regulation subject, including the ability to recognize and analyze the influencing factors, the ability to formulate appropriate regulation schemes, the ability to choose the appropriate regulation timing, the ability to observe and obtain feedback information, etc. The improvement of these regulation abilities needs continuous learning.

iii. Realizing the organic integration of modern information technology and foreign language classroom teaching is the fundamental measure to restore the ecological function of information classroom. In the process of integrating information technology and foreign language teaching, we should aim at building an ecological classroom jointly built by teachers and students, pursue the balance between system input and output, the harmony between ecological factors, the consistency between teaching objectives and teaching results, and the common growth of teachers and students, create an ecological classroom environment, cultivate a good teacher-student relationship of equal dialogue, adopt a mixed teaching model, and reasonably adjust the role orientation of teachers and students. Establish multi-dimensional classroom teaching interaction and build a multi-dimensional teaching evaluation system. When modern information technology and foreign language classroom ecology reach a high degree of fit and integration, classroom ecology has a new and different organization. This optimized structure can give better play to the function of optimizing structure, tuning relationship, promoting evolution and ecological education in the process of interacting with the environment. The organic integration of information technology and classroom teaching is conducive to solving the internal imbalance of the system, including the imbalance between teaching ideas, teaching roles and English teaching practice, the imbalance between students' learning habits, information literacy and English learning objectives, the imbalance between the use methods of multimedia and three-dimensional courses and English teaching effect, and the imbalance between the new English teaching model and the traditional English teaching system. The imbalance between traditional evaluation methods and English teaching objectives.

d) Avoiding the flowerpot effect in the construction of classroom environment

In the classroom ecosystem, environment is an important factor that interacts with teachers and students. The classroom environmental factors in the perspective of educational ecology include not only the physical environment and humanistic environment in the classroom, but also the teachers and students who have an impact on other ecological subjects and their ancillary characteristics, such as their teaching ideas, emotional attitudes and so on. When constructing the classroom ecological environment, we should pursue the goal of being conducive to the coexistence of teachers and students, and try our best to avoid the negative effects of the classroom environment on talent training and teacher development. However, in the process of foreign language teaching informatization, information technology not only brings great convenience to foreign language teaching, but also makes the classroom ecology appear the flowerpot effect, which is not conducive to the sustainable development of teachers and students. For example, some teachers are dependent because of the convenience of electronic courseware, so they won’t have classes without courseware; Some students are dependent because of the convenience of the Internet. They can’t write without the Internet, and so on.

i. In order to avoid the flowerpot effect brought by the information environment, we must correctly understand the role of information technology and make rational use of information technology in the process of teaching and learning. We should not only make full use of the convenience brought by modern information technology such as computer network, but also pay attention to our own sustainable development and try to avoid information technology obsessive-compulsive disorder or information technology dependence. When constructing the classroom teaching environment, it is not that the more expensive the equipment is, the better the environment is, and the better the conditions are, but that the goal is to serve the sustainable development of teachers and students, and build an ideal ecological classroom environment in an appropriate and timely manner.

ii. The flowerpot effect nurtured by the traditional classroom teaching environment still exists. In the traditional classroom, teachers explain step by step according to the formulated teaching plan, and students sit quietly in the classroom and listen carefully. This way of teaching and learning has already reached a balance after long-term running in. In the classroom environment where teachers do everything, students have formed the habit of passive learning and lost the ability of autonomous learning and metacognitive strategies to a great
extent. This flowerpot effect still plays a role in the face of the information-based reform of foreign language teaching, which hinders the process of students’ adaptation to the information-based teaching environment. In order to weaken the flowerpot effect produced by the traditional classroom and reconcile the interactive relationship between the learning subject and the learning environment, it is necessary to vigorously cultivate students’ autonomous learning ability, help them form good habits of autonomous learning, develop metacognitive strategies of self planning, self-monitoring, self-management, self-assessment and self-adjusting learning behavior, cultivate students’ adaptability to different environments, and expand students’ adaptation threshold to environmental factors.

IV. Conclusion

In view of the great advantages of the current application of information technology in foreign language teaching and the irreversibility of the use of information technology, and the ecological imbalance caused by the application of modern information technology in English classroom teaching, colleges and universities should grasp the reconstruction principle of college English classroom ecosystem, adjust measures to local conditions, formulate a talent training system and curriculum construction system in line with the restoration and development of college classroom ecosystem, and improve the information technology literacy of teachers and students, reform the teaching methods, teaching evaluation system and other links, so as to realize the real integration of information technology and English classroom teaching, build an interactive and open English classroom ecosystem, and ultimately create a harmonious, efficient and sustainable ecological classroom between teachers and students.

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