

Optimization of Constructivism Theory on Web-Based English Teaching --- Case in Advanced Professional College

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ABSTRACT. This paper attempts to illustrate the outcomes in optimizing the Web-based English Teaching under framework of Constructive theory. Unprecedentedly, the extensive utilization of highly developed information technology enriched and deepened teaching modes and methods. Benefit from the easily accessible resources of this era, we expanded our practice and gained abundant experience in English teaching, our self-assessment and evaluation shows that students' ability in English learning is enhanced remarkably. Reflecting our teaching activity, with the consideration of our students' characteristics in Advanced Professional College, we wish to share and discuss the significance we achieved in applying Constructivism in teaching practice.

KEYWORDS: Constructivism, Advanced professional college, Web-based english teaching

1. Introduction

Since the 21st century, information network technology has been developing at an amazing speed. In the field of education, web-based teaching has become one of the important means in teaching, the application of IT technology involves in variety of classrooms, primary schools, middle schools, colleges, universities and lifelong learning interacting activities. We, as teaching staff, in this essay, try to exemplify our methodology of English teaching and learning in optimizing Constructivism Theory in Advanced Professional College.

In the “Basic Requirements for English Teaching in Advanced Professional College”, issued by the Advanced Education Department of China Education Ministry, states that “the modern teaching methods including computer multimedia technology and network technology should be actively introduced and used in teaching to improve English teaching conditions”. Practically, enforcing the Constructivism in network teaching mode could be an ideal option. Constructivism theory, as an important branch of cognitive psychology, reveals the cognitive laws in human learning, which has far-reaching guiding significance to teachers' teaching and students' learning. With the rapid development of information technology, Constructivism theory is bound to provide a theoretical basis and guarantee its effectiveness in the construction of Web-based English teaching mode.

2. About Constructivism Theory

In the 1960s, Piaget, a Swiss Child Psychologist, put forward the theory of “Cognitive Structure”. He believed that children gradually build up a personal knowledge structure about the external world in interacting with the surrounding environment, so as to develop their own cognitive structure. Since then, R.J. Sternberg and D. Katz have made further research on this basis, emphasizing the key role of individual initiative in the process of constructing the cognitive structure. Vygotsky's “Theory of Cultural and Historical Development” holds that individual's learning behavior is developed under a particular historical and social cultural background, and social environment can plays an important role in supporting and promoting the development of individual's learning. These researches have contributed to the further enrichment and development of Constructivism theory, which create conditions for the actual teaching practice. Based on the theory of Constructivism, teaching design and curriculum planning must aim at promoting the development of students'

logic and concept thinking, and improving students' autonomous learning ability. What must be emphasized is the important role of the connection with the surrounding environment in students' education.

3. A Brief in Present English Learning Situation in Advanced Professional College

Advanced Professional College targets at professional training, or more precisely, specifies in developing students' technical skills in the foreseeable workplace. By completing arranged course study and internship, students in Advanced Professional Colleges should be able to acquire professional certificates, diploma and qualifications before they start in their real work post. These future-employed front line staff, namely. the graduates from Advanced Professional College, are supposed to participate the professional job activities right away after college education, on the threshold of their career. Undoubtedly, compared with comprehensive universities, college strives to provide enough professional related learning sources in the limited time, ensure their students to be competent in their profession to accomplishing the job task. Apart from curriculum of propaedeutic course, specialistic course and fundamental course, experiment course weighs substantially in the overall college curriculum. Experimenting is an essential composition in course design for students to vision and exercise future work practically. Actually, this realistic experimental and operational training activities ensure college output qualified workforce to target job professions. College courses are generally designed for 3 years, inclusive the 3rd year internship. Through the scheduled 3 years, medical college students, for example, are supposed to finish propaedeutic, specialistic courses, fundamental course and experimental courses. Under this circumstance, a problematic issue arises - timing and curriculum schedule. In the case of Medical college, the academic course arrangement is forced to lean towards medical courses by squeezing much time in fundamental courses, here, for instance, English, Chinese, Philosophy etc. To be more specific, within 3 years, as one of the "fundamental" courses, English, takes only one academic year or 142 hours in total. We can infer that English course is taking a minor part of overall course composition, its existence seems just playing a role to complete the diversity function in college course design.

Due to the limited teaching hours, teachers are in the dilemma situation, how to perform the teaching task to accomplish the entire teaching plan is a problem. The majority of college students, neither have intention in pursuing further academic goal, nor possessing the capabilities in acquiring CE4 or CE6 or other English certificates, they have no enthusiasm, no study plan for English course; On the teachers side, to manage and deliver English course are under time pressure, which may cause emotionally frustration in teaching management, it leaves little space in cultivating students' comprehensive ability. On the contrary, students, an academic goal of "PASS" is the only purpose to attend English course, college students have less passion in further academic pursuits averagely compared with students in comprehensive universities. To cater students' taste and accomplish the teaching tasks, teachers in Advanced Professional College were inclined to adopt the spoon-feeding indoctrination way in teaching. Cramping the knowledge simply makes students learning passively to memorize the limited "knowledge" instead of exploring the learning pleasure of creativity. In this case it is impossible to cultivate students' ability of English language application.

4. Web-Based Teaching Practice in Advanced Professional College on the Basis of Constructivism

4.1 How to Utilize Web-Based Multimedia Technology to Optimize Learning

To solve the existing problem, the attempt of applying the Constructivism proved to be an adoptable solution. The content of Constructivism Theory is significant, a large number of articles and practice have been published since the last 3 decades. Its recognized core value is "student-centered" teaching philosophy. Different from the traditional teaching method of "Teacher centered indoctrination classes", Constructivism emphasizes the cognitive role of learners. Within Constructivist theory, knowledge isn't something that exists outside of the learner.

"Knowledge is actively constructed by the learner, not passively received from the outside. Learning is something done by the learner, not something that is imposed on the learner." (Baker, E. & McGaw, B. & Peterson P (Eds), 2007).

Under the guidance of the teacher, student initiatively collect the topic-related data and information, discover the scope of the issue, explore by comprehensive reading, interpret the profound meaning, they can build their own knowledge system. The rapid development of modern information technology enlarges the possibilities for both individuals and learning groups to immerse themselves in the learning environment proposed by Constructivism. The utilization of computer skills and language learning complement each other and can successfully optimize learners' effectiveness on both of the 2 subjects. It's a fascinating experience that would interest learners to explore their topic before and after class, which widens students horizon in knowledge understanding and knowledge construction. In our practice of English teaching, teachers usually provide a platform for students to perform self-learning through Internet and guide them to

explore question-related topic accordingly. Each step is taken by learning sequences. When a new topic theory is planned to be delivered in class, instead of jumping to the point, we start with “brain storming”; it goes by questioning, group discussion, searching etc.; by summing up students various ideas and opinions, we inspire them to probe the topic from different approaches, to perceive from different angle, to deepen their understanding. To restrain students from getting away from the center topic, we frame the learning by step-by-step questions, assist them to reflect, source, discuss and find answers. Learning approaches are various, by the means of internet, group work, video watching etc. With the abundant multimedia software, students can handle and deal with information actively, thus, gain knowledge. To enhance students’ learning outcomes, we usually insert topic-centered opinions via presentation, speech and video show, and followed by discussion. Questioning could trigger students interest to learn actively and continuously; essay writing assignment after class be a good way to consolidate the learning outcomes into a long-term valuable experiences; working with students, setting up assessment and evaluation standards; motivating students to pursue knowledge with their own learning skills, are also precious experience in teaching reflection, it facilitates teachers to improve teaching skills. Adopting constructivist theory is of great benefit to both parties involved in teaching. This allows students and teachers to participate in each step of learning and observe the learning process of each other as a general picture; this accumulation of learning experience will eventually develop into maturity self-reflection capability, this learning maturity will turn out to be the cornerstone in learning system enhancement.

With the free access to wide range online resources, learning to differentiate the valuable from the useless information, to analyze the data and information, to extract essence and remove dross, are all valuable experiences, enable students to establish their own learning style. Under the multi-media learning environment, from a series of knowledge processing, students can form their own knowledge system, achieve the ideal preview effect, in other words, optimize learning outcomes. In the whole process, students handle the information comprehensively from different perspectives, consolidate the knowledge and build their own knowledge system afterwards. And meanwhile they can interactively exchange their learning results through various open platforms. It is the characteristics of openness, dynamicity, multi-dimensional interactivity of the Internet that students can have an access to such a colorful and broad information world for their English learning, which conforms to the independent learning environment required by the Constructivism Learning Theory, and effectively improves students' ability to explore new knowledge and solve problems.

4.2 How to Play an Assistant Role in Online Teaching

The theory of Constructivism addresses students as the main body in learning, but it also emphasizes guiding role of teachers. “Teachers serve primarily as guides and facilitators of learning, not instructors.” “As a result, one is likely to find less “instructing” and more guiding and facilitating in online education. In addition, online education can be effectively constructed to emphasize a facilitating role for instructors while students engage in simulations, web-based data collection, and ill-structured problem solving. The self-regulatory and self-mediated nature of online education promotes the instructor taking the role of guide or coach.” (Doolittle, P.E. 1999). It holds that teachers are the helpers of students in constructing knowledge system, rather than the transmitters of knowledge. In addition, knowledge acquiring is related to situational activities. “Content and skills should be understood within the framework of the learner’s prior knowledge. All learning begins within an individual's prior knowledge, regardless of constructivist affiliation. Understanding a student's behavior requires an understanding of the student's mental structures, that is, an understanding of the student's understanding.” (Doolittle, P.E. 1999). In practice, teachers should take time to assess the basic knowledge students have gained before designing the new course frame, make sure the effective delivery of the new topic on the basis of students’ prior knowledge. In other words, teachers should try to bridge the students new knowledge system with their old one. Furthermore, with the powerful web-based multimedia resources, teachers are expected to deliver the topic in variety of forms, sounds, videos, presentations etc. In Advanced Professional College, we created an English application situation that conforms to the teaching content, enables students to find, analyze and solve problems in the real task situation. For example, In course of grammar part of “Subjunctive Mode”, it could be a difficult topic for both teaching and learning. Delving the reasons, one of them could be that the students, grammatically, the average language literature level is relatively low, could be both in Chinese and in English, it could be a flaw in our overall education system. However, to begin with the topic teaching, the best approach is to understand students' mastery level of this grammar point. Initially, by questioning and sentence writing, we can check and assess the present level in application capability of “Subjunctive Mode”; our reviews could be helpful in designing grammar course target precisely; secondly, considering students’ difference in learning ability, we may unveil the beneath learning obstacles which block the understanding of “Subjunctive Mode”, in this case, analyzing Chinese grammar could be an effective approach. In the design of the course delivery in “Subjunctive Mode”, variety of pictures, videos, audio, animations and text information on the Internet can be used as powerful tool; these teaching resources, could help students to perceive from multiple angle and finally interpret the meaning of “Subjunctive Mode” conveyed; apart from that, these multi-media shall be the powerful tool in making courseware and improving teaching design. This kind of multi-dimensional information stimulation is helpful in fully

mobilizing students' sensory systems, stimulating their interest in learning, and constructing their own knowledge system.

4.3 How to Realize the Ideal Teaching Effect in Online Environment

According to the theory of Constructivism, knowledge is an explanation or hypothesis of the objective world, which will change and deepen by people's gradually deepening understanding. In solving specific problems, people need to combine the current situation to reprocess and recreate the original knowledge. When it comes to English Teaching in Advanced Professional colleges, teachers should focus on helping students to consolidate their existing knowledge and provide basic conditions for the establishment of new knowledge system. For example, they can use various learning software to build review platform, including from the basic knowledge of vocabulary and grammar to the application skills of writing, reading, speaking and listening, and apply multimedia forms such as network pictures, videos, graphics and texts, which will effectively stimulate the students' desire to consolidate the old knowledge. In addition, Constructivism holds that learners often have different understandings the knowledge explained in the same language way. Individual's understanding of knowledge needs to be based on their own knowledge and old experience, and also depends on the learning process in a specific situation. Thus the differences in individuals, background experiences and their formed knowledge system will definitely affect the quality of new knowledge construction.

In English teaching practice, teachers can strengthen the guidance of students' cooperative learning, so as to implement the diversified interaction among teachers, students and the electronic equipment, and each student can communicate with teachers, online resources and any other learners. In this process, students can gain different understandings of knowledge from others, hence deepen their own original knowledge from multiple perspectives, and absorb new knowledge. This method of learning will not only help to improve the students' learning efficiency, but also cultivate their self-learning ability in both English language practice and computer technology utilization, so as to optimize students' overall learning capabilities.

Above all, under the guidance of Constructivism, English teaching in Advanced Professional College focuses on the cultivation of students' autonomous learning ability, independent thinking ability and creative ability. The multimedia Web-based environment presents a colorful information world to students. The combination of the two will certainly help students master English knowledge more efficiently and improve their language application in practice.

5. Conclusion

A variety of researches and practices can be found on Constructivism. As one of them, we are inspired to discuss and explore further on the insight of this topic. Learning is a process of knowledge formation involves more active self-behavior rather than teacher dominated indoctrination classes. Review all the feedbacks of this practice, what might be a concern is that, the application on Constructivism practice actually involves time investment, which in our case, could occupy students after class time more than expected.

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