3rd International Conference on Culture, Education and Economic Development of Modern Society (ICCESE 2019)

Cultivation of Higher Cognitive Abilities of Students Majoring in Hospitality Under the Guidance of Bloom's Educational Objectives

Taking the Bilingual Course of Food Cost Control as an Example

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Abstract—With the rapid development of hotel industry, the industry's requirements for talents have also increased year by year. The cultivation of application-oriented hospitality talents with higher cognitive abilities is a new requirement for the development of talents in hotel development. This study combines Bloom's taxonomy of educational objectives classification theory and explores strategies for effectively cultivating students' advanced cognitive skills through case studies. This research has certain reference significance and reference value for the professional teaching reform, bilingual teaching and the cultivation of students' advanced cognitive ability.

Keywords—Bloom's taxonomy of educational objectives; higher cognitive abilities; bilingual teaching; teaching reform

I. INTRODUCTION

In the 40 years of reform and opening up, the hotel industry, as the earliest industry to introduce foreign capital and talents, has made great progress in both quantity and quality (Lin Zhu, 2016). However, the lack of high-level talents has always been the most prominent problem in the hotel industry. The specific performance is that although the profession is correct, it does not meet the requirements of the employer and must be retrained (Lu Junyang, 2016). An industry survey conducted to develop a map of hotel management courses shows that excellent test scores and a wealth of expertise are becoming more and more important in the inauguration process (Bao Fuyuan, 2016). But those who have the characteristics of finding problems, self-learning and critical thinking are the high-level talents that the industry really needs (Zhan Xiaohui, Yang Dongtao, Luan Zhenzeng, An Yanrong, 2018). These traits possessed by high-level talents are generally referred to as higher cognitive abilities (Xiao Chunyu, 2017) and belong to higher levels of cognitive ability (Yan Zhiyuan, 2011). In teaching, it is expressed in the application of analysis, synthesis, evaluation and other abilities (Zhong Zhixian, 2005).

II. LITERATURE REVIEW

A. Bloom's Taxonomy of Educational Objectives

The concept of higher cognitive abilities was first proposed by Bloom in the 1956 publication "The Classification of Educational Objectives, Volume I: Cognitive Domain" (Xie Huaqiong, Fang Hui, 2018). He divided the cognitive domain into six levels: memory, comprehension, application, analysis, synthesis, and evaluation (Wang Zhongli, 2016). Knowledge refers to the recognition and memorization of the identification of specific knowledge or abstract knowledge. Comprehension refers to the initial understanding of things, does not require deep understanding, can understand the meaning of the materials and recapitulate, explain or infer future trends in the materials learned in their own words. Application refers to the direct application of the concepts, rules, and principles that are learnt and the acquired knowledge can be used in appropriate situations. Analysis can divide the overall data into components, understand its organizational structure, and clarify the basic theory and basic principles in detail. Synthesis, based on analysis, comprehensively processes the decomposed elements and recombines them into a whole as required to solve the problem in a comprehensive and creative way. It emphasizes character and initiative, and is a high-level requirement, such as completing a unique speech or a review of the paper. Evaluation is the highest level in cognition domain and requires a rational and profound ability to make accurate judgments about the value of materials (Zhang Fan, Wang Gang, 2015). Among them, memory, comprehension, and application are classified as lower cognition, and analysis, synthesis, and evaluation are classified as high-level cognition (Xiao Chunyu, 2017). With the development of educational psychology, Bloom's students Anderson and Kraswall revised the of educational objectives classification in 2001 (Li Liwen, Li Yanglong, 2013). The revised six categories are: memory, comprehension, application, analysis, evaluation, and creation (Liu Ying, 2016).

Zhu Xun and Ma Wenjing (2014) believe that the classification system of Anderson and Kraswall is more

scientific and operational than Bloom's classification system. On the one hand, the revised classification is more in line with the psychological development level of students' cognition, so it is more scientific. On the other hand, the revised edition unifies the three parts of learning, teaching and evaluation, making it more consistent and providing the same reference classification system for teachers of different disciplines. Therefore, teachers can accurately grasp the teaching objectives in classroom, thus improving the operability of teaching objectives (Zhu Xun, Ma Wenjing, 2014; Liu Ying, 2016).

B. Higher Cognitive Abilities

Compared with lower cognitive ability, which is defined as a regular and mechanical memory, comprehension and application of information (Yang Sijie, 2018), the academic community cannot agree on the connotation of higher cognitive abilities (Zhang Chunhua, 2014), as He Ying (2016) describes it as "undefined concept, century problem". From the perspective of humanities, higher cognitive abilities are often understood as a manifestation of critical thinking (Zhang Liqun, 2015). However, in the field of psychology, people's understanding of higher cognitive abilities is more focused on solving problems rather than logical reasoning (Sun Hongan, 2018). In the field of education, people define it more in terms of ability, and attribute analysis, evaluation, and creation to higher cognitive abilities (Wang Maohua, 2018).

The importance of advanced cognitive ability is not only reflected in its ability to train students to link all kind of knowledge in order to solve more complex problems, but also in that the higher cognitive abilities includes the lower cognitive ability, that is, six classifications in the educational objectives classification can be trained through the cultivation of higher cognitive abilities (Yang Sijie, 2018). However, due to language barriers, the process of translating English into a native language occupies most of the time that teachers teach in bilingual courses, which results in teachers' lack of flexibility in the use of teaching methods, making classroom teaching a simple memory training or a basic English teaching (Zhang Liqun, 2015). If the requirement of the teaching content and teaching objectives is biased towards emphasizing higher cognitive abilities, then what the professional bilingual teacher should do to ensure the integration of higher cognitive abilities into his teaching process is the focus of this paper.

III. RESEARCH DESIGN

The research object of this paper is the bilingual course offered by the International Hospitality Management School of University of Sanya for junior and senior students of hotel management major — "F&B Cost Control". The course was awarded a school-level bilingual course in 2017. The teaching objectives of the F&B Cost Control are designed to help students understand how hotels control their food and beverage costs, how hotels design standard menus, and how hotels analyze cost management through operational data. At present, 173 students have been divided into four classes according to their English level for separate classes. Their course teachers have overseas study experience.

A. Course Settings

"F&B Cost Control" is a core course in the hotel management major. The materials used in the course include: Principles of Food, Beverage, and Labor Cost Controls (original), written by Paul R. Dittmer and J. Desmond Keefe III, published by John Wiley & Sons in 2011 and its Chinese reference book; Gong Yunyi's "Food and Beverage Cost Control" published by Tourism Education Press in 2014. This course is set to 30 credit hours for a total of 2 credits.

Students will conduct a survey of a physical hotel/restaurant/restaurant in the form of a group of 4-5 people for 15 weeks and complete the survey report of the two groups. The content of the report should include a brief introduction of the research object, its basic business status, the production of standard menus, the status of cost control, the analysis of profitability, and the improvement measures recommended for it. In the last two weeks of the semester, students are required to present their research results to other students in the class in the form of PPT. And after the presentation is completed, submit the final version of the research report to the course teacher.

The purpose of using a teaching method such as writing a survey report is to let students know how to achieve corporate profitability through sales forecasting, standard menus, storage distribution, and menu design. In addition, students should learn to use the existing financial knowledge to analyze the current financial operations of the company, and combine the business characteristics of the respondents to propose corresponding measures for their cost control.

B. Research Content

In this paper, the following four parts are studied through interviews with course teachers and questionnaires for students:

- How to develop higher cognitive abilities during the course setting process
- What is the impact of bilingual teaching on students?
- Has the student's higher cognitive abilities been improved?
- Has the student's English proficiency been improved?

C. Data Collection

An hour-long interview was conducted with two teachers who taught "F&B Cost Control". The student's questionnaire consisted of a single-choice question questionnaire on a 5-point Likert scale and an open-ended questionnaire. The content of the single-choice questionnaire focuses on students' perceptions of bilingual courses, while the open-ended questionnaire focuses more on the development of students' higher cognitive abilities. A total of 173 questionnaires were distributed and 165 were returned. A total of 152 valid questionnaires were obtained, with an effective rate of 87.86%.

IV. RESULTS AND ANALYSIS

A. Integration of Higher Cognitive Abilities in the Course

According to a study of the syllabus and lesson plans of "F&B Cost Control", the course did not explicitly require students to use higher cognitive abilities. However, after discussions with the course teachers, it was found that students must use higher cognitive abilities in order to complete the research report specified in the course, otherwise they could not complete their research on the entity.

First of all, the instructor should ensure that students can remember the key concepts and contents of "F&B Cost Control" through classroom explanations, classroom questions and final exams. Second, when writing the first entity business research report, students must classify and summarize the research objects. The report should include current sales strategies, financial analysis results, and cost control status, which require students to apply the skills of overview, classification, summary and presentation. Finally, in writing the second research report, students must compare the cost control strategy of the research object with that of the competitor and then recommend an improved cost control strategy for it. This time students must use the three higher cognitive abilities in the Bloom's Teaching Objectives analysis, evaluation, and creation — to complete the report.

Therefore, according to the case teaching of the entire course, students must learn to collect data and discover problems through interviews and other forms. Then, find the entry point and analyze the problems found. Finally, after weighing the pros and cons, propose the best solution and show it to other students in the class through PPT. It can be seen that students must use higher cognitive abilities to complete these tasks. At the same time, as the content deepens, the English requirements for students also become higher.

B. Students' Perceptions of Bilingual Courses

When the research involved what the bilingual course is taught, the students generally reflected that it was difficult to understand the content, especially the part that was explained in English. Compared to other courses taught in Chinese, students feel that they need to spend more time reading and preparing the course. During the class, students find it difficult to follow the instructor's ideas. For example, "I am a liberal arts student, and my mathematics is not good. If the F&B Cost Control is taught in Chinese, maybe I can understand the mathematics part. But now it is taught in English and I cannot understand what the teacher was saying." In addition, it is difficult for students to understand classroom questions and classroom tests of the course teachers. At the same time, students are not confident enough to express their thoughts and opinions in English. These phenomena are particularly pronounced in the two classes with lower English proficiency.

When students are asked what measures course teachers need to take to help improve their learning outcomes, the most frequent recommendations include: use more Chinese, especially when it comes to difficult content; use simple words; slow down; multiple interpretations of complex concepts and so on. Some students also suggest that the course teachers should provide some Chinese materials related to the course before class, which will help them better understand the content of the class.

After understanding what the higher cognitive abilities is, students agree that the enterprise research report completed by the group unit does help the improvement of higher cognitive abilities. By writing research reports, students can not only apply the knowledge learned in the classroom to the actual situation, but also discover the differences between theory and practice, so that they can propose suggestions and strategies that are in line with the enterprises benefits from the perspective of the enterprise. In addition, some students believe that writing research reports will help to improve their skills of teamwork, listening to others' opinions, and expressing different opinions.

However, when it comes to whether higher cognitive abilities are trained during the class, students generally report that they spend most of their time focusing on class notes because they are taught in English. In other words, most of the student's class time is used to record the content taught by the course teacher, and they rarely have the opportunity to apply higher cognitive abilities.

Whether the bilingual course of "F&B Cost Control" improves students' English oral, written and reading ability, the survey results show a trend of polarization. In the class with the highest English proficiency, 75% of students think their overall English ability has improved, and they are more confident in the use of English. However, 68% of students in the two classes with medium English proficiency believe that their overall English ability is only slightly improved. In the classes with the weakest English proficiency, 86% of students even believe that their English communication skills and confidence in using English have not been improved. The same conclusions are reflected in the classes with the strongest English proficiency, but the reasons are different. 10% of students think their English ability is high, so they don't feel that the bilingual course can help their English skills.

In addition, 78% of students believe that teaching in English is the main reason for their unsatisfactory results in the "F&B Cost Control" course, although 57% of them said they can understand the content of the class. 48% of students believe that the college should provide a Chinese course of the "F&B Cost Control" for them, or provide Chinese-translated textbooks to enable them to achieve better results.

V. CONCLUSION

This paper takes the bilingual course "F&B Cost Control" of International Hospitality Management School of University of Sanya as the research object to explore how to cultivate the higher cognitive abilities of hotel management students under the Bloom's educational objectives. The main focus of the research is on whether students feel the need to use higher cognitive abilities during the learning process; whether bilingual instruction affects students' understanding of the course; and whether students feel that their English level has improved. The results of this study show that, in most cases, students are more recognized for group-based research projects. To complete corporate research and write relevant reports, students must use higher cognitive abilities. As the research progressed, students gained a deeper understanding of what they had learned and learned how to discuss their views with other members of the group. This will be of great help to their future entry into real jobs.

However, in the quality of classroom teaching, the results of the study showed relatively negative results. According to the survey, the form of class of the "F&B Cost Control" bilingual course is mainly as follows: the course teacher speaks on the podium, the students listen to and take notes under the podium, and there are fewer questions or discussions in the class. There is little or no interaction between teachers and students. Few students actively answer questions from the course teacher in the classroom or take the initiative to ask the teacher about the content related to the course. The pressure to complete teaching tasks also forces the course teachers to ask fewer questions or interact with students. The training of higher cognitive abilities cannot be reflected in the level of classroom teaching. Although classes with weak English proficiency can be used to explain why there is a lack of interaction in the classroom, but, for classes with strong English proficiency, the lack of interaction in the classroom cannot be attributed to the poor English proficiency of the students. The author believes that the lack of students' participation in classroom intercommunication is more related to the current domestic education evaluation system. This kind of educational evaluation system is mainly driven by examinations, which rewards memory rather than questioning. This can also explain why 78% of students are more concerned with the final results, rather than the actual knowledge that can be learned.

In order to improve the above situation, first of all, it is necessary to classify students of bilingual courses in a more detailed manner according to their English ability, so as to ensure that the English level of the same class is more consistent, and the teachers can teach students in accordance with their aptitude. Secondly, the teachers of the bilingual course need further training in the teaching techniques to ensure that the students can keep up with the rhythm of the class. Finally, it is necessary to improve the proportion of classroom interaction in the performance assessment to ensure that students are more proactive in class, thus encouraging students to use higher cognitive abilities.

In order to achieve the goal of cultivating hotel management professional application talents, the relevant courses in the hotel category must include training for students' higher cognitive abilities. Although the inclusion of the group research project in the course does play a role in the development of higher cognitive abilities, the results of this study show that the research project does not completely replace the traditional teaching. Therefore, in order to comprehensively develop students' higher cognitive abilities, bilingual courses must be divided according to their English ability. In order to develop students' higher cognitive abilities, unique teaching objectives and teaching content are set for each class.

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