

The Exploration and Practice of Seminar Teaching Method in Professional Graduate Education

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Abstract—According to the training target of professional graduate education in China, the research on the teaching mode reform based on the Seminar teaching method was proposed. The Seminar teaching method target was clarified. Then the “Information retrieval” course was taken as an example. And the Seminar teaching method design, the achievement evaluation mode and performance evaluation for the Seminar teaching method was stated. Through the evaluation result, it is shown that the ability of learn autonomously and think independently was promoted, and the innovative ability was developed for the students. Therefore, the quality of professional talent training was improved.

Keywords—professional graduate education; Seminar teaching method; information retrieval; instructional design

I. INTRODUCTION

Professional graduate education is designed to meet the needs of the new talents in the refined social division and vocational development. The training target is the high-level application-oriented professional talents with professional, occupational and creativity [1]. In essence, the professional graduate education is a kind of occupational education with certain academic foundation. Therefore, the professional graduate education should focus more on the applying knowledge and skill to solve practical problem. So it is different from academic graduate education, which should focus more on the knowledge reserve, problem finding and academic innovation.

The professional graduate education has been developed for more than one century, and becomes an important part of the degree education, and forms a relatively perfect talent training and education teaching system in western countries^[2]. In China, the professional degree is a reference to western countries. After the degree system reform, the professional graduate education has reached a rapid development stage^[3]. However, there is still a lack of orientation in the talents training target

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and mode, and the curriculum system construction for the professional graduate education in China. The professional graduate education also has the convergence problem with academic graduate education, and the occupational characteristics have not been revealed. Therefore, the scientific orientation and construction for the profession degree talents training mode and curriculum system, and the training characteristics determination is the core problem to be solved for the professional graduate education.

The construction of the scientific and effective professional training mode requires matching education modes method and mean. And the purpose of the course teaching is to make the students understand profession theory and train the research skill in related fields. Especially for the training of professional graduate talents, the openness, occupational and practicality must be emphasized during the teaching process. The key point in the exploration professional graduate teaching mode reform is that how to make the students change the role from “students” to “researchers”, the function from “learning” to “innovation” during the learning process, and highlight the occupational characteristics.

The traditional teaching mode has obviously defects:

- (1) The unidirectional communication. Only from teachers to students negatively, mechanically and solely, occasionally the students speaking are just footnotes for teaching or a simple verification for learning;
- (2) The verticality of status. The teacher has the absolute authority while the students only can listen and remember. It is difficult for the students to reveal opinions, especially for counter-criticism to teachers;
- (3) The learning process separation. There is a "two sheet skin" phenomenon between theory and practice. Sometimes the teachers are intoxicated while the students are ignorant.

The Seminar teaching method is beyond the traditional mode. The bidirectional and multi directional communication

method is used during discussion. Based on the respect of the academic freedom, the student's dominant status is fully reflected, and the multi-perspective and multi-level communication is realized. The Seminar teaching method is an effective way to carry out the research study, and is the innovative teaching method which integrates knowledge-transference, ability training and the quality improvement^[4]. Therefore, the research on the professional graduate teaching mode reform was proposed in the paper based on the Seminar teaching method.

II. THE SET OF TEACHING TARGET BASED ON THE SEMINAR TEACHING METHOD

Any teaching mode points to and completes certain teaching target. In the teaching mode structure, the teaching target is the core and restricts the other factors which constitute the teaching mode. It determines the operation procedure in teaching mode and the syntagmatic relationship between the teachers and students in teaching activities. And the teaching target is criterion and scale for evaluation. Because of the extremely strong inherent unity for teaching mode and target, the different teaching mode characteristics are determined. Different teaching modes are used to complete certain teaching target. The orientation of the professional degree talent training is high-level application-oriented talents, so the target should be set to reflect occupational and practical.

III. SEMINAR TEACHING DESIGN^[5]

The graduate course "Information retrieval" was taken as the example. For referring to the international Seminar teaching experiences and implementation steps, the Seminar teaching method was introduced step by step, according to the teaching target and the content and the students' characteristics. By the summary teach and monographic study, the Seminar teaching implementation process was constructed, including: guiding target, organizational research, classroom presentation and discussion, and comment and summary, as shown in Fig.1.

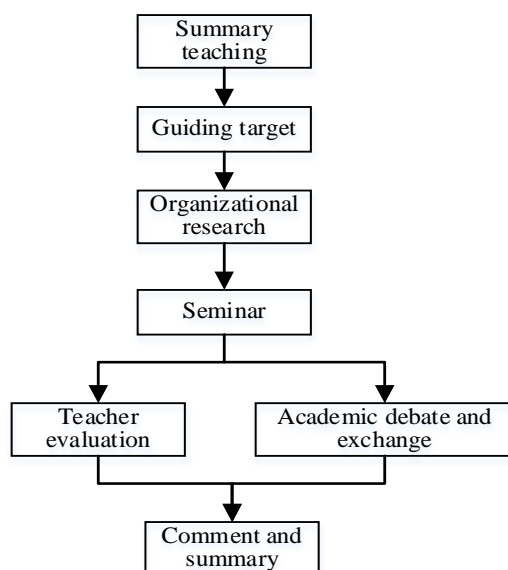


Fig. 1. The Seminar teaching implementation process

(1)Summary teaching: The teachers comprehensively and systematically introduced the basic method of Web information retrieval, the skill for the common search engines and the automatic translation, and the basic process for solving practical problems by information retrieval.

(2)Guiding target: Combined with the students' respective research direction, some research topics were distributed to students as the tasks. The task target and deadlines were set, and the students were guided to learn autonomously and research independently.

(3)Organizational research: Based on the assigned tasks, the students could flexible and comprehensively apply the theoretical methods taught previously to obtain and review the relevant literature. Then the development status and trend home and abroad, the latest advanced and key technique, and the major research institutions and researchers were sorted out. And the existing problems and deficiency in the current research was proposed.

(4)Seminar: Firstly, the reporter wrote the written report for the research results, and made the theme report which was used to preach and state views at the seminar. Then, the teacher evaluated the report on the information retrieval method, skill and accuracy. At last, all the members made academic debate and exchange to the statements, and posed problems and the opposite opinions or objections on the speakers' view and argument, or debated on the contradictory propositions, based on the theme report. The reporters and previous speakers could explain, supplement and even counter-criticism. In the Seminar teaching, the discussion is the soul, the difficulty and key part. During the teaching process in the democratic atmosphere, the thought was collided and the inspiration was enlightened. The students' comprehensive quality was improved undoubtedly by the process of seeking truth actively, questioning authority and expressing opinions fully.

(5)Comment and summary: The teacher made the overall evaluation of the seminar implementation process and quality, and pointed out the positive, mistake and the place which need further improvement. Finally, the next topic and reporter was arranged.

IV. THE ACHIEVEMENT EVALUATION MODE FOR THE SEMINAR TEACHING METHOD

The Seminar teaching method pays more attention to the students' performance during the learning process. So it is necessary to change the traditional achievement evaluation mode to meet the Seminar teaching needs. The evaluation criteria should mainly focus on the students' classroom performance, language expression, and the ability to complete research projects independently etc. And the achievement evaluation should implement to each seminar, including attendance, theme report, personal report, collective discussion and written report. The theme report is the mainly based on the form of individuals and groups, and the research results are presented orally. It is the basis for Seminar discussion, and the teachers give scores based on the oral expression. The collective discussion can promote the students' deeply understanding and recognition for the theme, and help students to thorough investigation. At the same time, the consciousness

of autonomous learning and teamwork is trained to complete the written report. The written report accounts for the largest proportion of the achievement evaluation. Therefore, the teachers are stricter in the written report, and students also spend more time to prepare it. Usually the written report is required at the end of the term. The attendance and personal report is used to investigate whether the students participate in discussion and their performance. It is used to encourage students to speak and participate in discussion positively, and experience the true value of discussion.

V. THE PERFORMANCE EVALUATION FOR THE SEMINAR TEACHING METHOD

The Seminar teaching method has been used in the professional graduate education for agricultural machinery specialty in the 2016 and 2017 grade in Tianjin Agricultural University, and the teaching effect was improved obviously. The Seminar teaching method has been investigated and evaluated in the aspects of curriculum target achievement, teaching process and effect by questionnaire. And the results were shown in the Table I. It is showed that the students have high satisfaction for the Seminar teaching method. Not only

have the students no longer thought that the "Information retrieval" course is boring, but also the learning initiative and consciousness was improved by the Seminar teaching method. And the basic skill necessary for scientific research was training, such as independently reviewing literature, writing summary, selecting topic, sorting data and writing report. So that the students could be active in the discipline forefront, grasp the latest research achievement and academic development trend, and expand the knowledge range.

However, there are some problems in the implement of the Seminar teaching method in the "Information retrieval" course:

(1) The seminar quality is depended on the theme report preparation, the reporter preaching quality, and all the members' enthusiasm.

(2) There is a high demand for the professional knowledge and the ability to control the classroom for the teachers. Therefore, the teachers not only should have solid subject knowledge and abundant teaching experience, but also should possess good organization and coordination ability, and should be good at finding and posing problems from students' comments and opinions.

TABLE I. THE RESULTS OF THE PERFORMANCE EVALUATION FOR THE SEMINAR TEACHING METHOD

Items	Satisfaction number	Proportion	Dissatisfaction number	Proportion	Indifferent.	Proportion
Curriculum target achievement	28	93.3%	2	6.7%	-	-
Whether like the Seminar teaching method	25	83.3%	4	13.3%	1	-
Whether enlighten the thought and expand the knowledge range	24	80.0%	6	20.0%	-	-
Whether improve learning interest	22	73.3%	8	26.7%	-	-
Whether improve the ability of autonomous learning and innovative	25	83.3%	5	16.7%	-	-

VI. CONCLUSION

The Seminar teaching method, which pursuing the unification of teaching and scientific research, emphasizing on the training of graduate students' scientific research ability, and focusing on the interaction and cooperation, has changed the single imparting knowledge teaching mode. It is conforming to the specialty of professional talents training and contributes to master the systematic knowledge. So it is the effective teaching organization forms to promote the graduate students development. Meanwhile, the Seminar teaching method is an open classroom form. The graduate students are free to express their opinions and participate in the classroom discussion democracy and equality. Then, the ability of learn autonomously and think independently was promoted, and the innovative ability was developed for the students. Therefore, the quality of professional talent training was improved.

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