Research on the evaluation system of kindergarten science education curriculum

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Abstract: Students' experience of course learning often depends on the recognition of the teacher's curriculum, mechanical and boring courses will often make a course lose vitality, how to use the online course platform to stimulate students' enthusiasm for learning is a problem we need to pay attention to, through the preliminary investigation and research found that only by constantly updating and improving the teaching evaluation mechanism, will mobilize students' learning initiative, truly understand the learning content, and be able to use learning knowledge.

1. Introduction

The course "kindergarten science education" selects the inter-school elective credit course in Liaoning Province, and the course is the provincial high-quality resource sharing course "Early Childhood Play and Guidance" built by the School of Preschool and Primary Education of Shenyang Normal University. In order to match the original syllabus, teachers make appropriate adjustments to the use of online course resources.

1.1. Course design

Through the study of this course, students can establish a scientific concept of children's play, identify with the educational concept of kindergartens with games as the basic activity, scientifically observe, analyze and evaluate children's play behavior, and effectively organize children to carry out related game activities, which helps students to obtain relevant professional knowledge and professional ability to engage in early childhood education, and lays a foundation for future work and professional growth. The teaching content of the curriculum mainly involves the characteristics of children's play development, the observation and analysis of children's play behavior, the organization and guidance of children's play activities, etc., so learners are required to have relevant basic theoretical knowledge of "kindergarten curriculum and teaching theory", "preschool psychology" and "preschool education". The curriculum mainly elaborates the nature and characteristics of children's play, the development characteristics of children's games, the creation of kindergarten play environment, the integration of children's games and curriculum and
the method of guiding children’s games, etc. After learning this course, learners can better learn the five major areas of kindergarten courses, as well as kindergarten environmental innovation series courses and "education practice" and other courses[1].

1.2. Course design

Three weeks before the start of the course, a questionnaire was conducted for existing students. Mainly for the students’ learning experience of the online course, learning input, teacher status and other three aspects of the set of questions, and let students according to their own preferences for the course for the teacher to ask questions or try to design the course, through this questionnaire survey, the course teaching content to make adjustments.

2. Evaluation of programme design

For a long time, the traditional teaching classroom has been teacher-centered, teaching is the teacher standing on the podium to give lectures to students, "teachers teach, students learn", students have always been the recipients of cramming teaching. Even if the teacher lectures are wonderful, there are always students who cannot fit in. In the intensive assessment teaching mode, all students are in control of their own learning. Students watch teaching videos, participate in online problem discussions, and form groups to discuss, summarize and report together. Teachers are no longer just standing on the podium to impart information, they are the center of attention. Instead, step down from the podium, help students, guide student group discussions, and check students' mastery of key learning objectives. Students truly become masters of learning.

Through the lectures in several aspects, such as questionnaires, platform learning data statistics, and live discussions of online Tencent conferences, it was found that students had the behavior of coping with homework and brushing lessons, and the root cause found that some students believed that the courses were meaningless, redundant, wasted time, and physically and mentally exhausted.

2.1. Pre-research

Most students complete the homework hastily without understanding, which is inefficient. It is precisely for these reasons that the class discussion cannot be successfully advanced, and the achievement of the course objectives is not satisfactory. To this end, the teacher has made partial adjustments to the curriculum, adopted a hierarchical evaluation system, and divided the evaluation of students into three levels: first, the primary cognitive level, students under this level only need to watch the course video, simply understand the relevant concepts and theories involved in the video, and make classroom learning notes; secondly, the transformation and sharing level, this level requires students to be able to find a point of interest in video learning or a point that they can flexibly control to publish their views, and be able to introduce the content of the first level, make the vast majority of students understand the information;[2] finally, the level of cooperation and coordination, the level for the chapter is the decisive basis for whether to pass, requiring students to find their own partners according to the content of the class views.

Complete the chapter homework. Students are required to be able to find the most suitable teammates according to the topic of the classwork, make up for their own deficiencies. They same to find some different partners can also be diversified to complete the homework, improving learning efficiency, because students who can recognize their learning strengths and weaknesses can find the most suitable partners for themselves. Through the introduction of three levels, students’ classroom participation has been improved, giving more students the opportunity to show their views, which has promoted the construction of self-evaluation system and teacher evaluation
system, and resources have been integrated and fully utilized. Repeated evaluation in the group of students on the self-awareness will be significantly improved, learning is not just mechanically stuck in the value level of "passing the exam". The burden of students has been reduced, in addition to the course content into the kindergarten internship. Curriculum contains the mode of internship so that students can truly apply the content learned. Not only can it be a sense of belonging to learning to get education, but also allow students to experience the actual role of task arrangements in classroom teaching. For students generally respond to useless teaching content. Teachers can re-discuss, upgrade or delete, so that the teaching evaluation system within the classroom is gradually formed.

2.2. Implementation feedback

At the same time, in order to effectively recommend the ideological and political construction of the curriculum, the theme link of the kindergarten game in the curriculum is designed to use the spirit of the Northeast Anti-League as the main red cultural course ideological content, and the anti-league character story speech and the red theme performance game are used to enrich the diversity of the course content[3][4].

3. Learning effectiveness evaluation

Through the formulation of the preliminary plan, students can gradually become active and can take the initiative to complete the teaching assignments assigned by the teacher, but if there is a lack of an effective evaluation plan, students will often lose enthusiasm for learning quickly, so we will take the following ways to evaluate effective learning effects.

3.1. The evaluation model that combines quantitative and qualitative operations

Through practical teaching, the evaluation model operated by the evaluation model that combines quantitative and qualitative is a better method now.

First of all, through online testing, self-study testing, group homework publication, personal self-evaluation, and inter-group evaluation to quantitatively analyze the learning status of learning, and consolidate the knowledge learned with the content of the exercises, for example: at the beginning of the course, the teacher needs to complete the "Learning Evaluation Scale", and place the online test and other project systems in it, assign points to mark, and design a learning status chart for each student according to the completion of the student, and then we can distinguish the students from the different icon states. Finally, according to the data, the students' completion status and the specific implementation process of the students' after-class tutoring plan are assessed;

Secondly, the use of classroom attendance, online video learning attendance, online discussion participation accuracy, group cooperation and other aspects of qualitative assessment to sublimate the content learned with practical analysis and application. Among them, online discussion and group cooperation to complete the difficulty is relatively large. Teachers in the teaching process need to arrange students to learn to design the discussion outline. The outline to drive the discussion, the source of the outline can be the content of the learning evaluation standard. The assessment of the degree of achievement of the online course task has always been a difficult point, students often start to brush the exercises after brushing the video. The online discussion and observation activities are particularly important in this course, because the discussion is open. Students must learn the video content in its entirety so that they have something to say and something to discuss.
3.2. Process evaluation is combined with final evaluation

Learning content is a continuous existence in the curriculum system, and no course is an isolated individual. In our teaching, we should make good use of students' ability to sigh and transfer, as well as to do a good job of evaluation and feedback after migration. For example, in the "Preschool Children's Game Design" class, the third chapter is about toys and game materials, in this chapter we must do the learning migration with the "preschool education module" and "art module", first let the students recall the original knowledge learned; secondly, let the students learn the content of the current issue according to the class, under the premise of understanding the content, apply the previous learning of children's handicraft content and combine with this course; and finally through the analysis and evaluation of the teaching concept to create the work of this course, so as to publish. Achieve teaching objectives by combining process evaluation with summative evaluation. The specific methods are as follows: 1. Make a toy and record a video of making a toy, and the toys made by the group members need to be related (art module support - process evaluation); 2. The group content members integrate the toys produced to arrange teaching examples and carry out online teaching demonstrations. (Pedagogy module support - process evaluation); 3. In the internship, in-depth kindergarten field courses, test whether the materials made by students are toys that children like. (Concluding evaluation).

Students can arrange their own learning progress according to their own situation, learn the teaching micro-videos recorded by the teacher or downloaded on the Internet before class, make corresponding notes according to the video explanation, and complete advanced homework. Back in class, the knowledge points that students did not understand and the confusion encountered in the process of writing homework were solved through joint exploration by teachers and students in class. The main content of classroom teaching has changed from the original teachers and professors to the students' post-school communication and teachers' guidance for solving puzzles. This teaching mode of learning first and teaching later under the condition of micro-video and network learning puts the knowledge transfer link in front, and moves the relatively difficult knowledge internalization process to the classroom to complete, which reduces the time for one-way transmission of knowledge from teachers to students in the classroom, increases the interaction time between students and teachers and students in the classroom, and makes more time in the classroom for effectively solving learning difficulties.

Based on this specific problem or person, whether it is communication between peers or group cooperation, it is an important embodiment of inquiry learning.

4. Conclusion

The original course teaching mode is "combining classroom teaching and after-class Q&A", and its focus evaluation method is understanding and memory. Nowadays, the focus of online course evaluation often pays more attention to students' ability to analyze and apply, which requires students to clarify problems through self-study, and to be able to ask questions, have ideas to say, and have information to dig deep into during the course teaching stage. You can't just stay just to learn without knowing why you're learning, and forget the basic value of the curriculum just for the sake of grades. Here, we must first refine the evaluation grade and rating content, so that students can find the direction of learning, for example, before class, the form of exploration we have to do is a small point of view, the grading is based on whether the student is confident in the views they put forward, whether the problem description is specific, and whether the data is excavated in depth; secondly, the online test we have to consider the student's ability to remember the textbook content and the ability to capture the key content of the video Finally, in the classroom discussion, our main scoring is based on whether the students' methods for solving the problems are direct and whether
they can effectively refine the problem points.

Students learn a series of goals at their own pace, not all students learn the same knowledge at the same time, but let students learn according to their own ability level and learning goals, and students are the masters of their own learning. With the main purpose of accessible learning, the Tongda Flipped Classroom combines teaching with modern technology to create a sustainable, replicable and manageable learning environment.

Teachers give special answers based on the key and difficult questions raised and summarized by students in extracurricular independent learning. In order to enable students to internalize knowledge more deeply, the key points and difficult problems that are prone to confusion in the process of collaborative learning, independent inquiry or achievement exchange are given individual guidance in the classroom. Students feedback the learning experiences and problems in the classroom inquiry to the teacher in the form of worksheets, and self-evaluate their own learning effects and the learning effectiveness of the group. Teachers should evaluate the results of students' memory comprehension stage and application analysis stage, and should highlight the characteristics of diversified evaluation forms and developmental evaluation goals. Finally, the teaching effect of flipped classroom was compared by distributing questionnaires. It can be said that in the construction of the evaluation model, students truly achieve self-mastery of learning progress, freeing teachers from the dilemma of teaching a lot of basic knowledge in the classroom, and providing learners with more time to show. Students are well placed to achieve independent learning, cooperative learning, and inquiry-based learning.

Whether the teaching goals can be achieved in the online course is a very critical issue, which is a closed loop of evaluation method improvement, teaching resource integration, teacher input, and student experience. In the course discussion, we must not forget to pay attention to students, and always update the teacher's educational awareness to encourage students' creativity, rather than blindly emphasizing the two aspects of memory and understanding.

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References