Construction and Application of Online "Golden Course" Teaching Performance Evaluation Index System from the Perspective of Connectivism

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Abstract

Taking the teaching evaluation of the online "golden course" as the research object, taking Connectivism as the theoretical basis, and from the perspective of the construction and improvement of the index system, the characteristics of the primary and secondary indicators are deeply analyzed. On this basis, we introduce the theoretical analysis of performance evaluation, design the online "golden class" teaching performance evaluation index system, and use the analytic hierarchy process to build an online "golden class" teaching performance evaluation model. The research results will be used to improve the quality of online teaching. The research on the countermeasure mechanism provides theoretical and methodological reference.

Keywords

Connectivism, Golden Lessons, Teaching Performance Evaluation

1. Introduction

In the current research on the reform of the curriculum system in the field of higher education, the construction of "golden courses" once jumped to become a hot topic. The Ministry of Education clearly stated that it is necessary to reasonably increase the difficulty of courses, expand the depth of courses, expand the selectivity of courses, and turn "water courses" into "golden courses" with depth, difficulty and challenge (Liu & Li, 2019). In the era of huge fragmented knowledge, complex information, and rapidly updated networks, Connectivism believes that learning is a process of connecting and forming networks, and that

knowledge paths are far more important than knowledge content (Wu, 2021). Teaching performance evaluation is one of the important components of curriculum and teaching reform. Effective teaching performance evaluation can promote teachers' professional development and growth, stimulate teachers' professional consciousness and subject consciousness, and then improve teachers' teaching quality, efficiency and level. At present, the research on "golden courses" only stays at the theoretical level, and there is no scientific and feasible analysis and research on the teaching performance evaluation index system of "golden courses".

2. Keyword Definition

2.1. Connectivism Learning Theory

Simmons positions the Connectivist learning theory as a learning theory in the digital age, which is proposed in response to the networked characteristics of the age. This theory views learning as a process of connection and network formation, and is best suited to learning in complex and rapidly changing fields (Tao & Jiang, 2021). In connectivism learning, students are able to form connections, gradually comprehend and maintain dialogue. For teachers, the main roles are as follows: masterminding, aggregation, filtering, and persistence.

2.2. Online "Golden Course"

The Ministry of Education proposed the golden class standard of "one degree of gender", that is, high-level, innovative and challenging (Li, 2018). From the perspective of teaching and learning, the construction of online "golden lessons" not only plays the leading role of teachers in the teaching process, but also mobilizes the enthusiasm and creativity of students for autonomous learning, thereby optimizing teaching effects, improving teachers' teaching level (Liu, Chen, & Liu, 2017).

2.3. Teaching Performance Evaluation

In "Educational Technology and Educational Innovation—The Theory, System and Practice of Performance Evaluation", Prof. Zhu Zhiting et al. defined performance as the behavioral tendency and performance achievement consistent with the overall goal and value pursuit of the organization (Zhu, 2011). Teaching performance evaluation is a process of giving a comprehensive and systematic evaluation of relevant content in accordance with the corresponding criteria and indicators, using practical and scientific evaluation methods, and taking online "golden courses" as the evaluation object.

3. Research Content

On the basis of Connectivist learning theory and performance theory, the first and second indexes in the index system are established through literature review, questionnaire survey and expert interviews, etc., and the evaluation index system

of online "golden class" teaching performance evaluation system is adopted by using the analytic hierarchy process. The weight of each level index item finally determines the online "golden course" teaching performance evaluation index system.

According to the constructed online "golden course" teaching performance evaluation index system, the students of the national excellent online open course "Drilling and Completion Engineering" course of Southwest Petroleum University were selected as the research objects, and an empirical study was carried out on the course to verify its relevance, and based on the results of the case study, the conclusion-level suggestions for the application of the evaluation index system are put forward.

4. Research Ideas

For the teaching performance evaluation of online "golden courses" in colleges and universities, it is necessary to establish and improve the evaluation standards and systems, and it is necessary to combine the concepts and characteristics of online learning and the learning methods of learners to evaluate, not only play the leading role of teachers in the teaching process, but also play a role in the teaching process. It is necessary to mobilize the enthusiasm and creativity of students for independent learning, realize the organic combination of quantitative and qualitative assessment, and establish a scientific and perfect online "golden course" teaching performance evaluation index system. The research idea of this study is shown in the Figure 1 below.

5. Research Methods

5.1. Literature Research Method

Literature research refers to a research method that can retrieve, identify, organize and summarize literature. After reviewing a large number of literatures on Connectivism, online "golden course" teaching performance evaluation index system and other related aspects, and sorting out the research status at home and
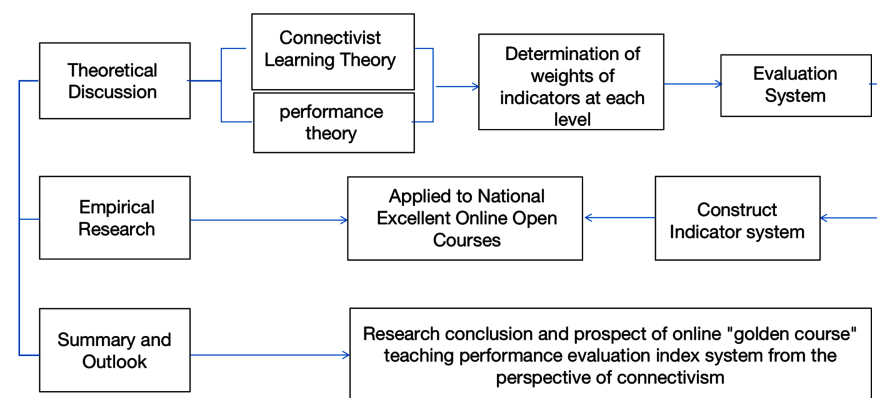

Figure 1. Research ideas on the teaching performance evaluation index system of online "golden courses" based on the perspective of connectivism.

abroad, the aim is to build an online "golden class" under the guidance of Connectivism learning theory and performance theory. Class teaching performance evaluation index system.

5.2. Investigation and Research Method

The method of asking questions and conducting research by systematically collecting materials related to the actual situation or historical situation related to the research object is called the research method. In this study, the weights of the evaluation index system were calculated by using the AHP method by conducting questionnaire surveys or interviews with experts and learners, and in the empirical analysis, the national high-quality online open course "Drilling and Completion Engineering" of Southwest Petroleum University was used in this study. The students conducted a questionnaire survey to verify the science, rationality and operability of the online "Golden Course" teaching performance evaluation index system.

5.3. Analytic Hierarchy Process

Analytic Hierarchy Process (AHP) first decomposes complex problems into several constituent factors, and then divides several constituent factors into minutes according to the dominance relationship, thereby forming a hierarchical structure. The overall ranking of the relative importance of the final decision-making scheme is obtained by synthesizing the judgment of the decision-maker (Liu, Chen, & Liu, 2017). This research adopts the analytic hierarchy process to obtain the weight distribution, and constructs an online "golden course" teaching performance evaluation index system.

6. Results and Discussions

1) At present, the research on online "golden courses" has paid more attention to the theoretical basis research, application model research, utility analysis and research status review, but the research on teaching performance evaluation is not perfect. Course teaching performance evaluation, determine evaluation indicators, build an evaluation system, and provide advanced theoretical support and evaluation standards for the construction of online "golden courses".

2) This study adopts Likert scale and AHP to change the standard of online "golden course" teaching performance evaluation from qualitative research to quantitative research, reduce human subjectivity, and combine relevant theoretical foundations to highlight online "golden courses". The objectivity and scientificity of the evaluation index system of teaching performance of "class".

3) Based on the theory of connectivism, this study analyzes the online "golden course" from seven aspects: knowledge view, learning view, curriculum view, teacher view, student view, environment view, and interaction view. Form a learning network formation process, focusing on the connection of external knowledge sources.

7. Summary

Most of the teaching performance evaluation indicators of online "golden courses" belong to moderation indicators. Later research and practice should further innovate the original data processing method of moderation indicators, determine the evaluation standards of moderation indicators, and improve the accuracy and stability of teaching performance evaluation results (Liu, Mao, & Wang, 2019). The conclusions of this research could be the basis of the evaluation logic, the evaluation operation, and the questionnaire standards. Moreover, the teaching performance evaluation mechanisms and the evaluation promotional plans could be developed to accelerate the deployment of new evaluation model.

Fund

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

Li, Y. L. (2018). The Creation of "Golden Lessons" Needs the Support of Reforming the Education Evaluation System. *Guangming Daily*.
http://opinion.people.com.cn/GB/n1/2018/1205/c1003-30443620.html

Liu, H., & Li, X. T. (2019). Research on the Creation of "Golden Courses" in Undergraduate Colleges and Universities from the Perspective of Scientific Research Feedback Teaching. *Theoretical Research and Practice of Innovation and Entrepreneurship, 2,* 31-32.

Liu, W., Mao, C. S., & Wang, S. H. (2019). Research on MOOC Teaching Performance Evaluation Based on Multiple Intelligence Theory. *Journal of Zhejiang Industry and Commerce Vocational and Technical College, 18,* 43-49.

Liu, Y., Chen, S. P., & Liu, L. X. (2017). Research on the Performance Evaluation Framework and Index System of Blended Learning. *Journal of Distance Education, 35,* 41-48.

Tao, L., & Jiang, Q. (2021). The Application of SPOC Blended Teaching Mode in the Humanities Quality Course in the Post-MOOC Era. *Culture and Education Materials, 12,* 191-193+136.

Wu, Q. (2021). Research on the Problems and Paths of Innovation and Entrepreneurship Education in Colleges and Universities. *Journal of Guangdong Vocational and Tech-*

nical College, 20, 54-56+128.

Zhu, Z. T. (2011). *Educational Technology and Educational Innovation—Theory, System and Practice of Performance Evaluation.* Beijing: Higher Education Press.