The Construction of Teacher's Teaching Quality Evaluation System Based on the Teacher-Student Cooperation Model

Xiaofei He[1], *Yuning* Wang[2*]
[1] Zhejiang Gongshang University Hangzhou College of Commerce, Hangzhou 311500, China
[2] Zhejiang Gongshang University Hangzhou College of Commerce, Hangzhou 311500, China

Abstract. Within the framework of advancing educational evaluation reform in the modern era, establishing a scientific and rational assessment system for the quality of teacher's instruction holds immense importance. This contributes to the further development of autonomous evaluations within colleges and universities, fosters enhancements in higher education evaluation systems, and supports the modernization of higher education governance. Considering the evolving demands for cultivating excellence in higher education, the assessment of teachers' instructional quality continues to face challenges, encompassing evaluation criteria, categorization guidelines, system enhancements, digital adaptation, and more. In the construction of a quality assessment system for teacher's instruction in higher education, continuous optimization of the evaluation system for teaching quality is essential. This optimization should be driven by scientific principles, grounded in collaboration between teachers and students, and aligned with fundamental principles, including categorized assessment, process orientation, digital integration, and more.

1 Introduction

Speeding up the establishment of a high-quality education system stands as the primary objective of higher education reform and development. The evaluation system of higher education plays a pivotal role in advancing the high-quality growth of higher education. Evaluating teacher's instructional quality, as a component of universities' independent assessments, significantly influences the enhancement of teaching standards and resonates deeply with every educator. Yet, the existing teacher teaching quality evaluation system faces numerous challenges. It falls short of effectively promoting the concept of "evaluation for improvement." Constructing a teacher teaching quality evaluation system in collaboration with teachers and students marks a new frontier in exploration.

2 The present state and challenges in evaluating teacher's teaching quality in Chinese colleges and universities

Typically, evaluating teacher's teaching quality encompasses the establishment of evaluation criteria, the identification of evaluation participants, the disclosure of evaluation procedures, the gathering of evaluation data, and the communication of evaluation outcomes. The government has not succeeded in creating uniform teaching quality assessment standards. Instead, each school devises its own standards and conducts evaluations based on its

*Corresponding author: 370894921@qq.com

unique circumstances. Despite analyzing existing policy documents in colleges and universities and conducting extensive research, numerous issues persist in assessing teacher's teaching quality in Chinese higher education. Firstly, the uniform nature of the evaluation standard disregards the distinctions between various academic disciplines and types of courses. The assessment predominantly centers on the teacher's performance, overlooking student's attitudes, learning outcomes, classroom interactions, and related aspects. Secondly, the exclusivity of the evaluation's subject primarily consists of one-sided student assessments of teachers. It neglects student self-assessment, peer evaluations among students, or collaborative teacher-student evaluations. Thirdly, the evaluation process is overly simplified, mainly emphasizing outcome-based assessments while neglecting process evaluations. Fourthly, the evaluation methods lag behind, failing to harness the full potential of modern technologies like big data analysis and artificial intelligence. These technologies could enhance the analysis of teaching quality assessments, improving their precision and efficiency. Fifthly, there is a delay in providing feedback on evaluation results. The focus primarily rests on assessment scores, while feedback on opinions and recommendations is overlooked. This results in the delayed communication of evaluation outcomes to teachers and students, hindering the evaluation's role in fostering teaching improvement. Sixthly, the enthusiasm of teachers and students for participating in the evaluation is limited. The design of the teacher's teaching quality evaluation system predominantly caters to university administrators, with minimal involvement from ordinary teachers and students. This approach emphasizes administrative management thinking and often neglects profound insights into the psychological aspects of university student's learning. It primarily dissects teacher's instructional behaviors based on the presumption of ideal teaching practices, inadvertently overlooking the essence and process of learning[1].

In recent years, an increasing number of countries and educational institutions have been reevaluating teaching assessment methods, with a focus on comprehensive assessment, feedback, and active student involvement. These assessment approaches foster a closer connection between teachers and students and significantly address various issues in teaching evaluation. We refer to this assessment model as Teacher-Student Collaborative Assessment (TSCA).The Teacher-Student Collaborative Assessment model aims to view educational participants - both teachers and students - as partners in enhancing educational quality. It seeks to enrich educational practices through their collaborative involvement in the evaluation process, emphasizing the principles of teacher-student cooperation, interaction, and mutual development. This assessment model can significantly address the issues present in teaching evaluations at colleges and universities.

3 The theoretical foundation for establishing a teacher-student cooperative evaluation system for teaching quality assessment

3.1 Constructivism

Constructivism theory was initially proposed by the renowned psychologist Piaget in the 1980s and has since developed into a comprehensive framework, becoming a widely accepted cognitive theory today. This theory serves as a critique and an evolution of traditional cognitive theory, stipulating that learning is an active process of individual knowledge construction. According to this perspective, learning is not a one-way transmission from teachers to students, but rather a process wherein students, within the context of their own experiences, construct meaning from new information. This approach facilitates the acquisition and integration of knowledge.[2].

Constructivist theory can also be applied to the evaluation of teaching. The traditional methods of teaching evaluation have various limitations, one of which is the limited active participation of students in the entire evaluation process. This includes their

inability to contribute to the development of evaluation criteria and the limited understanding of teacher's perception of student's opinions about their own learning. This deficiency impairs a deep understanding of the student's learning processes..To overcome these challenges, it is essential to embrace evaluation methods aligned with constructivist principles. This involves incorporating reflection, dialogue, and feedback and creating a collaborative framework between students and educators. Such an approach promotes cooperation and enables both teachers and students to actively engage in the entire teaching and learning evaluation process, ultimately enhancing the quality of education.

3.2 Cooperative learning strategies

Cooperative learning strategies gained significant development in the United States in the early 1970s. Cooperative learning allows learners to gain cognitive and emotional benefits from mutual cooperation, and this learning style largely determines student's evaluations of the effectiveness and satisfaction of cooperative learning[4]. Its emphasis lies in promoting cooperation, mutual support, and collaborative knowledge construction among students. Fundamental principles of cooperative learning encompass student's shared responsibility, interdependence, active participation, and the establishment of common goals. Teacher-student collaborative assessment relies on cooperative learning as the foundation that motivates students and teachers to collaborate in evaluating learning processes and outcomes[5].Essential aspects of collaborative assessment encompass an equitable partnership between students and teachers, collaborative development of assessment criteria, shared data collection, joint interpretation of assessment results, and cooperative formulation of improvement plans. This collaborative assessment enhances the objectivity and validity of the evaluation.

Within collaborative assessment, students are considered the focal point of the evaluation and actively engage in every phase of the assessment process. Such active involvement assists students in gaining a deeper understanding of their learning requirements and areas for enhancement, while also bolstering their independent learning capabilities and critical thinking[6].

4 The implementation pathway for constructing the teacher-student cooperative evaluation system for teaching quality

Constructivist theory and cooperative learning strategies offer a theoretical foundation for establishing the teacher-student collaborative evaluation system for teacher teaching quality. However, certain principles must be followed to create a logical implementation roadmap.

4.1 Guiding Principle

Firstly, it is essential to emphasize categorized evaluation indicators. Presently, the assessment of teaching quality predominantly relies on conventional evaluation criteria, encompassing teaching approach, instructional content, teaching methods, and instructional outcomes[7]. However, it lacks discipline-specific and categorized evaluation. Some universities have embarked on innovative approaches, as exemplified by Shantou University, which has established an evaluation index system that combines both common and individualized indices tailored to the distinct characteristics of various disciplines and courses. This approach effectively aligns with the specific talent development requirements of diverse academic fields and course types, resulting in more credible and targeted evaluation outcomes.

Secondly, it is essential to prioritize the process-oriented approach. It is crucial to focus on all aspects of teacher's teaching and student's learning as they can offer valuable insights for future teaching endeavors[8].Evaluating student's performance throughout the learning process offers valuable feedback to aid teachers and students in comprehending student's learning progress and areas

for enhancement. In the specific execution of the evaluation, it is imperative to shift from traditional outcome assessment to prioritize process evaluation, explore value-added evaluation, evaluate student's learning advancement, leverage information technology to the fullest, and enhance the scientific, professional, and objective aspects of educational evaluation.

Thirdly, there should be a commitment to digital transformation. Data forms the foundation for evaluating teacher teaching quality and conducting analysis for teaching improvement. The establishment of a data platform serves as the medium for presenting data[9]. The formulation of teaching quality evaluation standards, data collection, analysis, and feedback mechanisms must be facilitated through this platform. The Comprehensive Program for Advancing Educational Evaluation Reform in the New Era (2020) suggests comprehensive utilization of modern information technology, including the Internet, big data, and artificial intelligence, for in-depth analysis of routine monitoring data and intelligent evaluation processes. Digital technology enables educators to promptly gather student's learning data, encompassing online learning behaviors, study hours, and learning outcomes. Through the analysis of this data, teachers receive a comprehensive overview of the learning environment, allowing them to swiftly adapt their teaching approaches and enhance their teaching outcomes. Hence, establishing a digital platform tailored to the university's needs, facilitating teacher-student collaboration, communication, and efficient data collection and analysis, is of utmost importance.

4.2 Paths for Implementing Teacher-Student Collaboration in Assessing Teacher Teaching Quality

Within the Teacher-Student Collaborative Evaluation Framework for Teacher Teaching Quality, the teacher no longer serves as the exclusive evaluator but instead partners with the students. This implies that teachers and students are equal participants in the evaluation process, jointly striving to enhance learning results. More specifically, teacher-student cooperation is primarily actualized through the following approaches.

Firstly, it is important to define the evaluation objectives clearly. Teachers must articulate the evaluation targets, encompassing aspects such as knowledge mastery, skill enhancement, attitude development, and value formation. Simultaneously, teachers should engage in communication with students to make sure their understanding of the objectives and significance of the evaluation.

Secondly, it is essential to create an evaluation plan. Teachers should develop a comprehensive evaluation plan that encompasses evaluation content, methods, timing, and other pertinent factors. While formulating the evaluation plan, teachers should take into account the student's characteristics and the nature of the subject, selecting appropriate evaluation methods.

Thirdly, it is very important to establish the evaluation criteria. Teachers should collaborate with students to define the evaluation criteria, ensuring that they comprehend the criteria and evaluation expectations. Additionally, teachers should guide students in grasping the significance and function of these criteria[10]. It also serves to mitigate uncertainty and subjectivity throughout the evaluation process.

Fourthly, the execution of evaluation is imperative. During the evaluation process, teachers should thoroughly account for student's specific circumstances and the subject's characteristics, selecting suitable evaluation methods. These methods may encompass student's self-evaluation, peer evaluation, and teacher evaluation. Simultaneously, teachers must be mindful of student's individual variances and provide them with complete autonomy and choices.

Fifthly, data collection and feedback are integral aspects. Teachers and students collaborate in collecting, analyzing, and interpreting assessment data. This joint process aids students in gaining a deeper insight into their learning progress,

recognizing their strengths, and pinpointing areas for improvement. It is imperative to ensure that both students and teachers feel valued and supported.

Sixthly, the formulation of an improvement plan is crucial. Teachers and students collaborate to create these plans, drawing upon shared data and feedback. These plans may encompass enhancements to learning strategies, the provision of supplementary support, or modifications to course content. The joint development of improvement plans underscores the significance of personalized learning, guaranteeing that each student has the opportunity to enhance their learning in accordance with their unique needs and objectives.

5 Conclusion

Through teacher-student partnership in assessment, education becomes more participatory, personalized and effective. This partnership helps to increase fairness in assessment and student academic achievement, while also fostering independent learning and reflective skills. Teachers are not only transmitters of knowledge in this process, but also guides and partners in learning, working together to promote student's academic success. Teacher-student cooperative evaluation is also conducive to promoting teacher's professional development, continuously improving their education and teaching standards, and promoting the improvement of education quality.

Acknowledgement

This paper is a part of the 14th Five-Year Plan Teaching Reform Project for Regular Undergraduate Colleges and Universities in Zhejiang Province in 2022, with the project topic number **jg20220751**.

References

1. Taizhong Chen,Rujun Cao. Teaching evaluation in university classrooms: review and reflection under the learning stance. Applied Higher Education Research.6(04)52-57(2021).
2. Xiaobo Wang,Huiting Qiu .Exploring the practical teaching of "group work" course under the perspective of constructivism theory. Heilongjiang Education (Theory and Practice).(11)71-74(2023).
3. Yoders, S. Constructivism Theory and Use from 21st Century Perspective. Journal of Applied Learning Technology.4(3)(2014).
4. Bin Liu,Wenlan Zhang , Yujun Jiang. Online course learning experience:connotation,development and influencing factors. China Electrified Education.(10)90-96(2016).
5. Segundo-Marcos, R., Carrillo, A. M.Development of executive functions in late childhood and the mediating role of cooperative learning: A longitudinal study. Cognitive Development(63)101-219(2022).
6. Mora, H., Signes-Pont, M. T.,A collaborative working model for enhancing the learning process of science & engineering students. Computers in Human Behavior.(103)140-150(2020).
7. Gao, C. Y. Measuring university internationalization: Indicators across national contexts. Springer.73-110(2019).
8. XiaoYang,Jirong He ,Qin Xie . Exploration and Practice of Classroom Teaching Quality Evaluation System in Secondary Colleges of Universities--Taking the Business School of Chengdu University of Technology as an Example.Education Teaching Forum.(42)136-139(2016).
9. Ndukwe, I. G., Daniel, B. K. Teaching analytics, value and tools for teacher data literacy: A systematic and tripartite approach. International Journal of Educational Technology in Higher Education.17(1)1-31(2020).
10. Darling-Hammond, L. Defining teaching quality around the world. European Journal of Teacher Education.44(3)295-308(2021).