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Study on the Role of Student Feedback in The Value-added Assessment of Architecture Programmes

Xiaoni Xie*

Guangdong Construction Polytechnic, Qingyuan, Guangdong, 511500, China
* Corresponding author

Abstract: This study explores the important role of student feedback in value-added evaluation in architecture majors. It aims to reveal how to improve teaching quality through an effective feedback mechanism and provide a scientific basis for curriculum improvement. Value-added evaluation focuses on the growth and progress of students in the learning process, and student feedback, as a source of information that directly reflects the learning experience, can comprehensively support the assessment of teaching effectiveness. This study analyzes the existing student feedback mechanisms, explores their application methods and actual effects in value-added evaluation, and points out the deficiencies of the existing mechanisms and possible paths for optimization. The study found that feedback promotes continuous improvement of course design and teaching methods by constructing a closed-loop mechanism, and that this feedback mechanism shows significant advantages, especially in the field of architecture, which requires a high degree of practicality and creativity. The study concludes with recommendations for optimising the student feedback mechanism and looks ahead to the direction of future research, with a view to providing a feasible reference for improving the quality of education in the field of architecture.

Keywords: Student feedback; Architecture; Value-added evaluation; Teaching quality; Course design.

1. Introduction

In the current development of higher education, value-added evaluation, as an emerging method of evaluating teaching effectiveness, has gradually been widely used in various majors. For architecture majors, traditional teaching evaluation methods focus on the examination of students' final grades or learning outcomes, while value-added evaluation focuses on the growth and progress students have made during the educational process. Because of the professional and practical nature of the curriculum, how to effectively evaluate students' learning outcomes and promote the improvement of teaching quality has become an urgent problem for universities [1]. In this context, student feedback, as an important dimension of teaching evaluation, provides first-hand information and reflects the actual results experienced by students in the teaching process. Student feedback not only reveals the deficiencies in the teaching process, but also provides suggestions for improvement, thus providing valuable reference for the value-added evaluation system [2]. Therefore, studying the role of student feedback in the value-added evaluation of architecture majors not only helps improve teaching quality, but also provides theoretical basis and practical reference for universities to optimize curriculum design and improve teaching methods.

This study aims to explore the specific role of student feedback in value-added assessment in architecture programmes, and to analyse how student feedback affects curriculum design, teaching methods and the assessment of student learning outcomes. The study will provide a clearer understanding of the core function of student feedback in the value-added assessment framework, which is not limited to the collection of feedback information alone, but also to transforming student feedback into a driving force for teaching improvement [3]. This paper will explore in depth the relationship between student feedback and value-added assessment through systematic literature reviews and qualitative analysis, combined with existing educational evaluation theories. Ultimately, this research is expected to provide practical suggestions for improving the quality of teaching in architecture majors and provide theoretical support for the establishment of a more comprehensive value-added evaluation system.

In the research process, this paper will use a literature review method to form a systematic understanding of the role of student feedback in teaching by combing through relevant research on value-added evaluation and student feedback at home and abroad. At the same time, through qualitative analysis methods, the specific teaching needs and feedback mechanisms of architecture majors will be discussed in detail. During the research process, the unique teaching methods and curriculum structure of architecture majors will be combined to focus on the practical application of feedback mechanisms in teaching improvement. By comparing different feedback forms and methods, this study will provide reasonable insights and a theoretical basis for the future design of an evaluation system for teaching architecture majors.

2. Theoretical Basis

In higher education, value-added assessment, as an assessment method that reflects students' learning progress and development, has received widespread attention in recent years. Unlike traditional assessment methods, value-added assessment focuses on examining students' growth in the educational process and measuring the contribution of teaching to students' ability improvement, rather than just based on final grades. This assessment method emphasises the comparison of input and output, that is, by analysing the starting point of students when they enter the learning stage and their performance after the end of education, to determine the improvement of teaching quality. The theoretical basis of value-added assessment comes from the theory of educational effectiveness assessment, which was first applied in basic

education and has gradually been extended to higher education [4]. For architecture majors, due to the practicality and complexity of the curriculum, value-added assessment provides a scientific way to accurately measure the improvement of students' professional skills and comprehensive quality in long-term learning. Through this evaluation method, schools and teachers can better understand the effectiveness of teaching and make targeted improvements.

Student feedback, as a bottom-up evaluation mechanism, is an important supplement and source of information for value-added assessment. The development of student feedback theory can be traced back to the feedback link in educational assessment theory, which emphasises improving teaching through direct understanding of the learner experience. Feedback is not limited to subjective evaluation of course content and teaching methods, but also covers multidimensional reflection on teaching effectiveness, the learning environment and teacher performance [5]. In recent years, student feedback has been widely used in the assessment of teaching quality, especially in higher education, where it not only reveals students' needs and difficulties in the teaching process, but also provides direct reference for the optimisation of teaching content and methods. In architecture programmes, where the curriculum involves a combination of theory and practice, student feedback is particularly important. It enables teachers to understand students' real feelings when acquiring technical skills and tackling design challenges, so that adjustments can be made to make teaching more closely aligned with students' learning paths and career development needs.

The link between student feedback and value-added assessment lies primarily in their joint role in improving educational quality. By collecting practical experiences of teaching practices, student feedback can provide qualitative data support for value-added assessment. On the other hand, value-added assessment reflects the impact of teaching on students' ability development in a quantitative way. By combining qualitative and quantitative evaluation methods, the two together form a complete teaching evaluation system [6]. In this system, student feedback not only provides a wealth of reference information for value-added assessment, but also helps teachers understand the gap between the effectiveness of teaching and students' actual experience, so as to improve teaching in a targeted way. Especially in architecture majors, the combination of student feedback and value-added assessment can more accurately evaluate the effectiveness of teaching, make teaching adjustments more targeted and timely, and thus achieve continuous improvement of teaching quality.

In short, the combination of value-added assessment and student feedback in architecture majors provides a powerful tool for improving the quality of education. Value-added assessment provides a quantitative basis for teaching effectiveness through scientific assessment methods, while student feedback provides an intuitive perspective through specific teaching experiences. The synergy of the two not only helps schools and teachers adjust teaching strategies in a timely manner, but also provides more effective learning support for students. By gaining a deeper understanding and applying the relationship between the two, the quality of education in architecture majors can be further improved, laying the foundation for cultivating high-quality talent that meets the needs of the industry.

3. Student Feedback: An Analysis of The Current Situation in Architecture Programmes

Student feedback is increasingly being used as an effective way to evaluate teaching quality in current architecture programme education. Architecture programmes are highly practical and comprehensive, involving a large number of design projects and a combination of practical and theoretical knowledge. Student feedback can therefore provide valuable information to help teachers and administrators understand the challenges and needs of students in the learning process. Typically, student feedback mechanisms in architecture programmes include classroom questionnaires, anonymous feedback, teaching evaluation interviews and other forms. These feedback methods not only collect students' opinions on course content, but also their difficulties in coping with complex design tasks and suggestions for teaching methods [7]. However, although feedback mechanisms are already in place at many schools, student feedback in architecture still faces some special challenges.

Specifically, there are some limitations to the effectiveness of student feedback in architecture. First, the timeliness of feedback is often affected. Much of the student feedback is only provided after the course has ended, which means that teachers are unable to make immediate adjustments and improvements during the teaching process. Second, in architecture courses, many design projects are completed in teams. Individual student feedback may not accurately reflect the learning experience of the entire team, which limits the representativeness and universality of the feedback. In addition, architecture courses emphasise creativity and individuality, and students have very different needs for teaching content. It is sometimes difficult for teachers to make uniform teaching adjustments based on feedback, which undermines the effectiveness of feedback. For this reason, devising a more flexible and targeted feedback mechanism has become an important task for improving the quality of teaching in architecture programmes.

When discussing the relationship between student feedback and value-added assessment, it can be found that the role of student feedback is not just to provide feedback on teaching. It can also provide a unique perspective for analysing the results of value-added assessment. While summative assessment emphasises the progress students have made in the learning process, student feedback can reveal the factors behind this progress. For example, through student feedback in the classroom, it is possible to identify which teaching sessions are most effective in improving students' abilities and which aspects need improvement [8]. The level of detail in student feedback, especially when it involves feedback on specific course design tasks, allows teachers to more accurately understand the growth process of students in the project. Combining this information with the results of summative assessment can provide specific and actionable guidance for improving course design and teaching methods.

As can be seen from the discussion of existing literature and cases, the application of student feedback in architecture programmes has some unique characteristics. Compared with other disciplines, teacher-student interaction in architecture programmes is more frequent, and the feedback between teachers and students is more dynamic, which provides more vivid qualitative information for value-added evaluation. Teachers constantly discuss project progress with students

during the teaching process and listen to their feedback on design concepts, technical implementation, etc. This process itself is a reflection of value-added. Therefore, the combination of student feedback and value-added evaluation in architecture majors is more flexible and in-depth than in other disciplines [9]. By comparing subjective feedback from students with quantitative evaluation results, teachers can better identify the strengths and weaknesses in the teaching process, laying the foundation for continuous improvement of teaching quality.

In summary, although the student feedback mechanism in architecture majors faces some limitations in practice, its role in teaching evaluation cannot be ignored. Student feedback provides important qualitative information for value-added evaluation, and the two complement each other and work together to improve teaching quality. Based on the analysis of the current situation, identifying the problems in the existing feedback system is an important step in further optimising the feedback mechanism and improving the scientific and effective nature of value-added evaluation. This will not only help improve the quality of teaching in architecture majors, but also provide strong support for cultivating students' creativity and practical ability.

4. The Mechanism of Student Feedback in Value-added Evaluation

The mechanism of student feedback in value-added evaluation in the field of architecture reflects an effective combination of theory and practice. It provides the necessary data support for teaching improvement by continuously collecting and analysing students' opinions and suggestions. Feedback, as an important part of teaching, not only reveals the difficulties and challenges encountered by students in the learning process, but also helps teachers identify effective methods and deficiencies in teaching. In the framework of value-added assessment, student feedback constitutes a closed-loop feedback mechanism. This mechanism starts with students' learning experience, and then guides teachers to improve course design and teaching methods, and then verifies and adjusts the improvement effect through student feedback again in subsequent teaching [10]. This closed-loop process from “feedback” to “improvement” to “feedback” provides a virtuous cycle path for the continuous improvement of teaching quality, which is particularly important in the architecture major that focuses on practical and creative training.

In the teaching of architecture, course design and teaching methods pose particular challenges. The discipline requires students to have a solid theoretical foundation, as well as excellent practical skills and the ability to solve problems creatively. Student feedback allows teachers to understand the actual effectiveness of course design at different stages and make targeted adjustments. For example, when students feedback that some course content is too theoretical and difficult to understand, teachers can add some practical sessions or use case studies to apply theory to practical scenarios. When students suggest that some design projects lack guidance during the implementation process, teachers can increase the amount of guidance time or design more explicit guidance content. This feedback directly affects the improvement of course design, making it more in line with students' learning needs and professional characteristics.

In addition, improvements to teaching methods in architecture programmes are also achieved through student feedback. Architecture courses often take the form of workshops, design classes and project guidance, with teaching methods emphasising openness and interaction. Therefore, student feedback on these teaching sessions is crucial for optimising the methods. For example, students may feedback that some group discussion sessions lack sufficient time, or that communication between teachers and students is not in-depth enough, resulting in doubts in the design process that cannot be answered effectively [11]. By analysing this feedback, the teacher can adjust the teaching methods, for example by increasing the time for interactive discussions, improving the way group activities are organised, or encouraging deeper levels of student interaction. These improvements better serve the learning process, and their positive impact on learning outcomes can be quantified through value-added assessment.

The specific needs of architecture majors make the role of student feedback in value-added assessment even more significant. Because architecture teaching relies heavily on design work and practical operations, continuous adjustment and improvement of the teaching process is crucial for student growth. Student feedback helps teachers understand the unique needs of different students in the design process by reflecting the actual situation in learning. For example, in a complex design task, students may report that they are not proficient in using certain tools or that their design concepts lack direction. The teacher can then address these issues by providing additional technical guidance or arranging for individual tutoring. Through this feedback-improvement mechanism, teachers can not only help students improve their design and technical skills, but also improve the teaching level of the entire teaching team, thus achieving continuous improvement of teaching quality.

In short, the mechanism of student feedback in value-added assessment enables continuous and effective promotion of teaching improvement. Teaching in architecture majors relies on dynamic and interactive learning processes. The establishment of a closed-loop mechanism for student feedback lays a practical foundation for improving teaching quality. It not only helps to optimise course design and teaching methods, but also helps teachers to accurately grasp students’ learning needs, thereby improving the pertinence and effectiveness of teaching. This feedback-based value-added assessment model closely integrates students’ learning experience with teachers' teaching improvement, ultimately achieving continuous improvement and enhancement of teaching quality.

5. Student Feedback Mechanism Optimisation Strategies

In the teaching process of architecture majors, student feedback has become one of the important tools for assessing teaching quality. However, there are still some shortcomings in the practical application of the existing student feedback mechanism, which needs to be further optimised to improve its effectiveness and pertinence. The current feedback mechanisms usually include regular questionnaires and anonymous opinion collection. Although they can reflect students' needs and experiences to a certain extent, there are still limitations in terms of the depth of feedback and the application of feedback results. First, student feedback is often delayed, usually only after the end of the course, which

means that many problems cannot be identified and solved in time during the teaching process, thus affecting the immediate adjustment of teaching. Second, the feedback is not well structured, and much of the student feedback is scattered and lacks pertinence, making it difficult for teachers to effectively use this information when improving teaching [12]. Therefore, optimising the student feedback mechanism to make it more efficient and targeted is the key to improving the quality of teaching in architecture majors.

To improve the effectiveness of feedback, it is necessary to first increase student participation in feedback. Students can be motivated to participate actively through more diverse feedback methods, such as real-time feedback via mobile apps or online platforms, which allow students to provide instant feedback during the course. In addition, the feedback format should be more flexible. In addition to traditional quantitative questionnaires, other formats such as interviews and design seminars can be used to enable students to describe their learning experiences and needs in detail. Teachers should also actively create feedback opportunities during the teaching process, such as conducting periodic reviews during design projects and asking students about their progress and problems encountered, so that adjustments can be made in a timely manner. Through these methods, the feedback cycle can be effectively shortened, making teaching improvement more rapid and flexible.

On the other hand, deeply integrating student feedback mechanisms into the value-added evaluation system is an important way to optimise the feedback mechanism. In value-added evaluation, the emphasis is on the progress and growth of students in the learning process, and student feedback provides a direct reference for understanding this growth process. Therefore, by closely integrating the feedback results with value-added evaluation, the accuracy and comprehensiveness of teaching evaluation can be significantly improved. For example, indicators based on student feedback can be designed into value-added evaluation to assess the extent to which teaching meets students' individual learning needs. For architecture programmes, these needs often involve cultivating design thinking, improving teamwork skills, and mastering technical skills. By carefully analysing student feedback, weaknesses in teaching can be identified, and targeted improvement measures can be formulated.

In addition, in order to better integrate feedback and value-added evaluation, an analysis tool for teaching data can be introduced to cross-analyse student feedback data with other evaluation data such as academic performance and design project results. In this way, not only can the effectiveness of teaching be more comprehensively assessed, but also the feedback that is most critical to student growth can be identified, and teaching strategies can be optimised accordingly. For example, if the feedback analysis reveals that certain teaching methods have a significant effect on improving student design performance, this approach can be applied and promoted in subsequent teaching. This kind of deep integration means that student feedback is no longer simply a reflection of the learning experience, but also an important driver of teaching improvement and evaluation.

In short, optimising the student feedback mechanism and deeply integrating it into value-added evaluation is an effective way to improve the quality of architectural teaching. By increasing the timeliness and pertinence of feedback and enhancing students' engagement with it, teachers can respond more quickly to problems in teaching. At the same time, by incorporating feedback results into the value-added evaluation system, teaching assessment will be more comprehensive and more operational. Architectural education needs to find a balance between practice and theory. Through more effective feedback mechanisms, teachers can better understand students' needs and adjust teaching strategies in a timely manner, thereby promoting students' continuous growth in professional competence and creative thinking.

6. Conclusion and Outlook

This study has drawn some important conclusions from a systematic exploration of the role of student feedback in the value-added evaluation of architecture programmes. First, student feedback plays a vital role in the value-added evaluation of architecture programmes. Not only is it a direct reflection of students' learning experience and a valuable source of data for assessing the quality of education, but it also effectively promotes the continuous optimisation of teaching methods and curriculum design through a feedback-improvement-feedback loop. Student feedback injects a dynamic and personalised element into value-added assessment, so that teaching assessment does not just stop at a static analysis of results, but also focuses on the growth and progress of students in the learning process, thereby enhancing the comprehensiveness and scientific nature of value-added assessment. Especially in architecture majors, due to their unique practical and creative needs, student feedback can help teachers accurately identify deficiencies in teaching and provide personalised improvement directions, thereby improving the overall teaching effectiveness and student learning outcomes.

Current research has only revealed the preliminary role of student feedback in the value-added evaluation system, and there are still some directions that can be explored in depth. Future research can focus further on how to improve the representativeness and timeliness of student feedback to better support value-added evaluation. In particular, against the background of rapid development of information technology, attempts can be made to introduce data analysis tools and intelligent systems into the integration process of feedback and evaluation, and to mine the implicit information in feedback and identify the key factors affecting teaching quality through big data analysis. In addition, the specific effects of different feedback mechanisms on teaching improvement may differ. In the future, more detailed comparative studies can be conducted to analyse the relative effectiveness of different feedback methods, thereby providing stronger evidence for optimising feedback strategies.

Looking to the future, there is still much room for the development of student feedback in the value-added evaluation of architecture majors. The uniqueness of architecture education determines that the teaching improvement process requires a high degree of flexibility and active student participation, and student feedback provides a direct channel for this participation. Future research should further explore ways to motivate students to participate more actively in the feedback process, as well as institutional design and technical means to enhance the authenticity and effectiveness of feedback. In addition, the impact of feedback at a higher level on the curriculum system, teaching objectives, and education policy can be explored, so that the application of feedback is not limited to a single course or teacher, but

can have a positive impact at the level of the entire education system. In-depth research in these directions will help improve the value-added evaluation system and make it better serve the educational practice and talent cultivation of architecture majors.

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References

[1] BR, A. K. (2020). Method of Designing and Implementing Outcome-Based Learning in Value Added Courses for Contemporary Skills which Enhances the Program Outcomes. Journal of Engineering Education Transformations, 34(2).

[2] Gomis, K., Saini, M., Arif, M., & Pathirage, C. (2024). Enhancing the assessment and the feedback in higher education. Quality Assurance in Education, 32(2), 165-179.

[3] Khalife, S., Rybkowski, Z., & Hamzeh, F. (2024). Advancing Architecture and Engineering Education for Project Value Delivery. Journal of Architectural Engineering, 30(4), 04024030.

[4] Arun Kumar, B. R. (2022). Value-added courses with industry endorsement for bridging curriculum gap in the outcome-based learning: An effective strategy to post-graduate studies. Journal of Education, 202(4), 463-477.

[5] Khoukhi, M. (2021). Assessment of Two Engineering Courses in Architectural Engineering Program in UAE University Based on the Comparison of the Students Results with the Students and the Instructors Opinions. World Journal of Education, 11(4), 1-8.

[6] Hou, H. C., Wang, Y., & Lan, H. (2023). Student residential apartment performance evaluation using integrated AHP-FCE method. Journal of Building Engineering, 67, 106000.

[7] Martín-Garin, A., Millán-García, J. A., Leon, I., Oregi, X., Estevez, J., & Marieta, C. (2021). Pedagogical approaches for sustainable development in building in higher education. Sustainability, 13(18), 10203.

[8] Benkari, N. (2024). The built heritage as a resource for architectural education: documentation of the vernacular settlements and architecture in Oman. Journal of Cultural Heritage Management and Sustainable Development, 14(4), 710-729.

[9] Canaan, S., Deeb, A., & Mouganie, P. (2022). Adviser value added and student outcomes: evidence from randomly assigned college advisers. American Economic Journal: Economic Policy, 14(4), 151-191.

[10] Shettar, A., Nayak, A. S., & Shettar, A. (2020). Assessing individual contribution in a team project using Learning Analytics. Procedia Computer Science, 172, 1001-1006.

[11] Bhatnagar, A. K., Kumar, V., & Rana, A. (2022). Performance Assessment Model (PAM) for Higher Education System. Journal of Positive School Psychology, 9431-9440.

[12] Nayak, A. S., Hiremath, N. D., Umadevi, F. M., & Garagad, V. G. (2021). A hands-on approach in teaching computer organization & architecture through project based learning. Journal of Engineering Education Transformations, 34(0), 742-746.