

Exploration of Whole-Process Educational and Teaching Reform Oriented Towards the Integration of Learning, Evaluation, and Supervision

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Abstract: In the new era, the exploration of comprehensive educational and teaching reform oriented to the integration of learning, evaluation, and supervision has become a crucial path to improving the quality of education and teaching in universities. The integrated model of learning, evaluation, and supervision emphasizes the organic fusion of the three links: learning, evaluation, and supervision. It aims to form a scientific closed-loop system through the organic connection of these three components, promptly identify problems and weak links in the process of talent cultivation, and promote the continuous improvement of university education and teaching, as well as the quality of talent cultivation. This paper first analyzes the importance of educational and teaching reform oriented to the integration of learning, evaluation, and supervision. Furthermore, it briefly discusses the current practical difficulties in university teaching management and delves into the reform strategies for educational and teaching oriented to the integration of learning, evaluation, and supervision, with the hope of providing a reference for university teachers to carry out educational and teaching reform in the future.

Keywords: Integration of learning, evaluation, and supervision; Education and teaching; Reform strategies

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1. Introduction

In recent years, with the continuous updating of educational concepts, how to carry out university educational and teaching reform based on the integration of learning, evaluation, and supervision has gradually become a hot topic in the field of higher education. The integrated model of learning, evaluation, and supervision emphasizes the growth and development of students as the center, interconnecting and mutually promoting the three links of learning, evaluation, and supervision, and actively integrating and interacting with multiple elements such as teachers, students, teaching assistants, student affairs administrators, educational and teaching supervisors, etc., thereby better serving talent cultivation, as shown in **Figure 1**. This model not only helps to improve classroom teaching quality and strengthen teacher-student interaction and communication, but also optimizes the teaching

management system, thereby cultivating more high-quality talents.

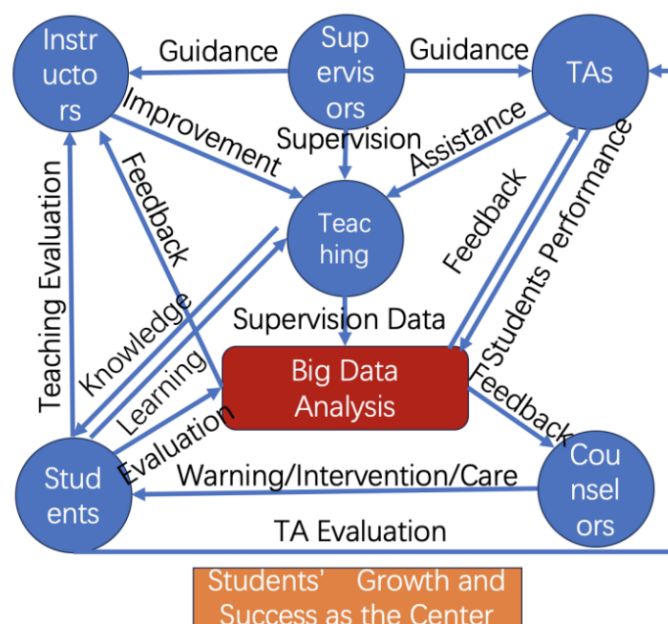


Figure 1. Schematic diagram of the relationship among elements of the reform and research on the whole-process teaching management oriented to the integration of learning evaluation and supervision.

2. The importance of educational and teaching reform oriented to the integration of learning, evaluation, and supervision

2.1. It is conducive to improving classroom teaching quality

The integration of learning, evaluation, and supervision emphasizes the organic connection of the three links of teaching, evaluation, and supervision to form an educational and teaching system that promotes each other, aligns teaching objectives with teaching directions, and ensures that teaching activities are always carried out around the corresponding teaching objectives^[1]. This not only helps teachers more clearly recognize the key and difficult points in teaching to optimize teaching design, but also guides students to clarify their learning directions and improve their learning efficiency. In addition, the traditional teaching evaluation system places too much emphasis on summative evaluation. Therefore, implementing the educational and teaching reform oriented to the integration of learning, evaluation, and supervision can enhance teachers' focus on students' learning processes and outcomes, thereby providing effective teaching feedback for teachers, helping them adjust teaching strategies promptly, and improving classroom teaching quality^[2]. Furthermore, teaching personnel responsible for teaching supervision usually have rich teaching and educational experience. They help teachers identify problems in their teaching through lesson observation activities, enabling teachers to better understand their strengths and weaknesses and make targeted improvements.

2.2. It is conducive to strengthening teacher-student interaction and communication

The diversification of teaching evaluation and the emphasis on formative evaluation are important components of the reform oriented to the integration of learning, evaluation, and supervision. This requires teachers to pay more attention to the individual differences among students and attach importance to students' needs for course learning and their choices of learning paths^[3]. In this process, through classroom observations, group assignments, etc.,

teachers can more comprehensively understand students' mastery of knowledge, the application of learning methods, and the development of thinking abilities, thereby providing personalized guidance and support for students and further enhancing effective teacher-student interaction. In addition, under the reform oriented to the integration of learning, evaluation, and supervision, the student affairs department can promptly pay attention to some common or individual problems encountered by students in their learning by analyzing student evaluations of teaching, and then intervene or provide care. This not only helps to enhance teacher-student interaction but also improves students' trust and belonging towards universities, fostering a campus culture and atmosphere where teachers and students respect, understand, and support each other ^[4].

2.3. It is conducive to optimizing the teaching management system

The implementation of the reform oriented to the integration of learning, evaluation, and supervision helps universities establish a scientific teaching management system, including but not limited to optimizing teaching plans based on student feedback, strengthening the supervision of the teaching process, and improving the teaching evaluation mechanism ^[5]. Especially in the current era of educational informatization, the student affairs department can utilize online teaching evaluation and supervision platforms to conduct data analysis, problem diagnosis, and strategy adjustment based on daily teaching activities, continuously improving the scientificity and effectiveness of teaching management. Meanwhile, the integration of learning, evaluation, and supervision also emphasizes the democracy and participation of teaching management, encouraging teachers and students to participate in teaching management. In particular, besides evaluating teachers, students also need to evaluate teaching assistants and the student affairs department to enhance the transparency and credibility of teaching management. In addition, the aforementioned teaching management activities are also a process for the student affairs department to understand the allocation and use of educational and teaching resources. Based on actual learning conditions, the student affairs department can rationally allocate and optimize the utilization of teaching resources to achieve the goal of promoting the innovative development of university education.

3. The current practical dilemmas of teaching management in universities

3.1. Single teaching evaluation standard

On the one hand, traditional teaching evaluations tend to focus more on students' test scores and attendance rates, and evaluate and supervise teachers based on students' performance. This approach neglects teachers' innovative abilities during the teaching process, teacher-student interaction effects, and the cultivation of students' comprehensive qualities to a certain extent. Meanwhile, teaching evaluation and student affairs management are often independent of each other, lacking effective coordination ^[6]. On the other hand, many universities currently adopt quantitative evaluation in the three aspects of learning, evaluation, and supervision. In the new era, both students' learning needs and teachers' teaching styles are gradually diversifying. This requires universities to innovate qualitative evaluation in combination with their specific situations when conducting teaching, evaluation, and supervision, thereby enriching the content and standards of teaching evaluation.

3.2. Students lack awareness of teaching evaluation

Currently, many students do not take the teaching evaluation activities organized by universities seriously when participating in them, and tend to randomly assign scores. Therefore, an increasing number of teachers receive "full marks." The reason for this situation may be that students lack understanding of the importance of evaluation and

do not recognize the direct relationship between teaching evaluation activities and teaching quality, regarding them merely as formal tasks ^[7]. At the same time, some students hold a negative attitude towards teaching evaluation activities due to distrust in the evaluation results, perceiving the evaluation process as cumbersome, etc. This requires teachers and relevant responsible personnel in the student affairs department to optimize and improve teaching evaluation indicators and processes to enhance students' trust in teaching evaluation activities. Additionally, due to the limited exchanges and cooperation between teachers and staff in the student affairs department, the results of teaching evaluations are not promptly fed back into teaching, making students feel that teaching evaluation is "useless," thereby reducing their enthusiasm for participating in it.

3.3. Relatively weak teaching supervision

In university education, the teaching supervision link has always been in a relatively "weak" position, with universities and teachers typically investing more resources into teaching and research. Even some universities lack a complete teaching supervision mechanism, which can lead to teaching supervision work lacking clear guidance and norms. For example, some universities have not established dedicated teaching supervision staff, with teaching supervision work being managed concurrently by the academic affairs office or other administrative departments ^[8]. Meanwhile, some teaching supervisors in universities lack professional educational backgrounds and rich teaching experience, resulting in a lack of scientific methods and techniques in practical work, thereby leading to ineffective supervision. Furthermore, some universities conduct teaching supervision work in a relatively formal manner, with supervisors lacking in-depth classroom observations and lesson evaluation records, leading to unsatisfactory supervision of teaching links.

4. Reform strategies for educational and teaching oriented to the integration of learning, evaluation, and supervision

4.1. Optimize the top-level design of university educational and teaching based on the integration of learning, evaluation, and supervision

With the continuous advancement of university educational and teaching reform, university faculty and staff should increase their emphasis on the integration of learning, evaluation, and supervision and optimize the top-down design of university education and teaching based on this ^[9]. Specifically, firstly, universities should strengthen the role of the supervision mechanism in the teaching and evaluation process. Supervision is not only the supervision of teachers' teaching quality but also the guidance and guarantee for the entire process of university education. For instance, relevant responsible personnel for university supervision should regularly inspect whether the teaching content closely relates to the assigned homework to strengthen the effectiveness of classroom teaching. Meanwhile, integrate and analyze information related to student evaluations of teaching and the student affairs department's attention to students' school life and learning situations to promptly identify problems in teaching and student management and provide specific improvement suggestions for teachers and staff in the student affairs department. Secondly, teachers should recognize that in the integration of learning, evaluation, and supervision, teaching is the core, evaluation is the method, and supervision is the support ^[10]. Among them, teaching evaluation should not only focus on students' academic performance but also pay attention to the growth of students' comprehensive qualities and abilities. The specific measures for supervision should be implemented in place to ensure the fairness and objectivity of "evaluation" and provide targeted feedback and suggestions for teaching activities. At the same time, universities should strengthen information construction,

build an integrated platform for learning, evaluation, and supervision, and promote the data-driven and intelligent management of the integration of learning, evaluation, and supervision. This way, through data analysis, a more accurate grasp of the development status of education and teaching and students can be achieved, providing strong data support for top-down design.

4.2. Introduce information technology to innovate university teaching quality evaluation methods

With the in-depth development of educational informatization, introducing information technology to innovate university teaching quality evaluation methods has become the main direction of current university educational and teaching reform. The goal is to leverage information technology tools and means to promote the interconnectedness of the three links of teaching, evaluation, and supervision for joint improvement^[11]. By establishing an intelligent teaching management system, universities can collect and analyze various data on teachers' teaching processes in real-time, including but not limited to teaching content, teaching methods, and student feedback. This data can not only help teachers promptly adjust teaching strategies and optimize teaching methods but also provide guidance for the student affairs department to carry out student management work. Taking the School of Electronics and Communication Engineering at Sun Yat-sen University as an example, the school leverages information technology to strengthen cooperation and exchanges between teaching and student affairs. Teaching assistants are responsible for collecting specific indicator data such as attendance rates and homework completion rates, issuing warnings to students who perform relatively poorly in these areas, and then the student affairs department intervenes to help improve students' learning enthusiasm (**Figure 2**). It can be observed that in some courses, students with relatively low homework completion rates in weeks 1–4 showed significant improvement in the middle to later stages of the course after the teaching-student affairs linkage mechanism was implemented. Similarly, for some courses with high failure rates over the years, such as Analog Circuits, through the integration of learning, evaluation, and supervision, problems in students' learning processes were identified and resolved early, and the failure rate of students also significantly decreased.

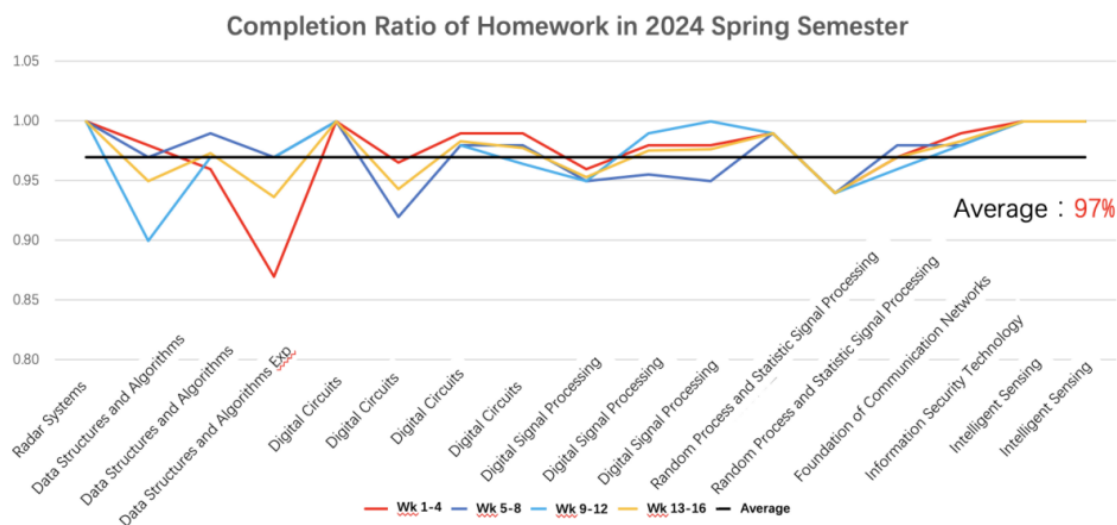


Figure 2. Completion rate of homework in the spring of 2024.

Information technology also provides a more scientific and accurate means for teaching evaluation. Traditional evaluation methods often rely on offline manual scoring and teachers' subjective judgments, which

can be prone to interference from some human factors in the process. After introducing information technology, big data technology can be utilized to quantify and evaluate teachers' teaching quality and students' learning outcomes, making teaching quality evaluation more accurate and effective ^[12]. In addition, through information technology, the work efficiency of supervision staff can be significantly improved, saving time previously spent on manual data collection and analysis. In this highly timely joint mechanism of teaching, evaluation, and supervision, supervision results can not only be quickly fed back to teachers but also promote healthy competition among teachers, stimulating their teaching enthusiasm and innovative spirit.

4.3. Conduct teacher training to enhance their understanding of the integration of teaching, evaluation, and supervision

The accurate understanding of teachers towards the integration of teaching, evaluation, and supervision is an important prerequisite for implementing education and teaching reforms. In response, colleges and universities should regularly conduct teacher training to help teachers comprehensively and deeply understand and master the core concepts and operational methods of the integration of teaching, evaluation, and supervision. On the one hand, colleges and universities should focus on the transmission of theoretical knowledge ^[13]. Through expert lectures, academic seminars, and other forms, they should interpret in detail to teachers and staff of the student affairs department the connotation, significance, and application value of the integration of teaching, evaluation, and supervision in education and teaching. This will enable faculty and staff to understand that the integration of teaching, evaluation, and supervision is not only a new teaching management model but also a revolution in educational concepts, thereby clarifying the student-centered position in education and teaching, and student management, and paying attention to the comprehensive development of students. On the other hand, teaching management practice is also very important. Colleges and universities should organize teachers to conduct lesson observation and evaluation, share excellent teaching experiences, and encourage teachers to integrate the concept of the integration of teaching, evaluation, and supervision into daily teaching, thereby continuously improving their teaching abilities and levels ^[14]. During this process, an interactive platform for teacher exchanges should also be established to allow teachers to learn from and inspire each other, and jointly explore the application and optimization of the integration of teaching, evaluation, and supervision in teaching practice. Through the above training activities, teachers' understanding of the integration of teaching, evaluation, and supervision will be significantly improved, promoting more standardized and scientific education and teaching activities in colleges and universities.

4.4. Improve the evaluation mechanism to enhance teaching quality and student satisfaction

In the teaching process, attention should be paid to the cultivation of students' autonomous learning abilities and innovative thinking. In response, colleges and universities should collect feedback and suggestions from students, teachers, and the student affairs department to establish a scientific evaluation system for teachers' teaching and students' academics. This system should not only focus on students' academic performance but also attach importance to teachers' ideological and political education abilities and students' comprehensive development. In the evaluation process, the incentive role of evaluation should be emphasized, and evaluation results should be timely fed back to teachers and students to help them recognize their strengths and weaknesses, thereby making targeted improvements. Additionally, students should be encouraged to actively participate in teaching evaluation activities, enhancing their sense of subjectivity and responsibility and making evaluation

more democratic and transparent ^[15]. When evaluating students and teachers, process evaluation should be adopted, using a combination of quantitative and qualitative evaluation methods, consisting of self-evaluation, peer evaluation, and social evaluation. Social evaluation can be conducted by enterprises engaged in school-enterprise cooperation or local education departments. In the supervision process, colleges and universities should strengthen the full-process monitoring of education and teaching management and play the leading role of supervision work, providing teachers with professional teaching guidance and support to help them continuously improve their teaching levels and abilities. By continuously improving the evaluation mechanism, problems and deficiencies in the implementation process of the integration of teaching, evaluation, and supervision can be identified and adjusted in a timely manner, promoting the sustainable and healthy development of college education and achieving the educational goals of improving teaching quality and student satisfaction.

5. Conclusion

In summary, in exploring and practicing the educational and teaching reform oriented towards the integration of teaching, evaluation, and supervision, through the implementation of strategies such as optimizing the top-level design of college education and teaching, innovating the evaluation methods of college teaching quality, conducting teacher training, and improving the evaluation mechanism, colleges and universities have achieved certain results in the quality of education and teaching. Especially under modern educational theories, colleges and universities should continue to innovatively explore strategies for improving education and teaching and student management work, thereby providing society with more high-quality talents with good professional abilities and comprehensive qualities. In the future, it is expected that more educators will participate in the practice of the integration of teaching, evaluation, and supervision and jointly explore more scientific models of college education and teaching.

Disclosure statement

The authors declare no conflict of interest.

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