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Design and Evaluation of Faculty Portfolios in U.S. Universities from an Evidence-Based Perspective – Insights into Establishing a Sustainable Mechanism for Faculty Ethics in Higher Education

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Abstract: This paper explores the design and evaluation of faculty portfolios in U.S. universities by closely examining the entire implementation process. It focuses on four key aspects: the active involvement of teachers in the design phase, effective collection and systematic management of qualitative data, the formulation of clear and transparent evaluation criteria, and thorough preparation for conducting the evaluation of teaching portfolios. Furthermore, from the perspective of building a sustainable faculty ethics system, the paper offers four practical insights and suggestions that may inform and improve the management of teaching portfolios in Chinese universities.

Keywords: U.S. universities; teaching portfolios; faculty teaching evaluation; faculty ethics in higher education

1. Introduction

From a semantic analysis perspective, "portfolio" refers to a collection of representative works. Initially, artists used this format to compile their most significant works and present them to potential clients. Traditionally, a "portfolio" consists of works created by the presenter, who selectively showcases specific pieces. When applied to higher education, a teaching portfolio is a collection of a teacher's teaching and research works, intended to demonstrate their professional status. The selection or submission of portfolio content is collectively determined by the creator of the works and the recipient of the portfolio, involving the community, the institution, and the teacher themselves. Electronic portfolios, often referred to as electronic portfolios, e-portfolios, digital portfolios, or online portfolios, are collections of electronic evidence typically managed and maintained online by the user. This electronic evidence includes text, electronic documents, images, multimedia, social media, and hyperlinks [1].

In the United States, teaching portfolios are essential tools for educators in the field of education. Teachers can use their portfolios to outline their achievements, which can be organized in both fixed and dynamic ways. Typically, the portfolios of university faculty in the U.S. include a variety of evidence from different sources to support the teacher's professional ethics. These sources include student work samples, self-reflections, course

syllabi, and classroom research reports [2]. Teachers typically include a wide range of materials in their portfolios. Important components include statements on teaching philosophy and teaching responsibilities (such as course names, student numbers, student demographics, course instruction, and how teaching aligns with departmental goals). In recent years, China has introduced several management regulations regarding faculty ethics in universities [3]. Establishing a robust management mechanism is crucial for advancing faculty ethics, and a well-established, smoothly functioning system is key to building a collaborative effort in faculty ethics development. Therefore, teaching portfolios, designed with an evidence-based perspective to document teaching behavior, serve as a powerful tool for establishing a sustainable mechanism for faculty ethics in higher education. Chen proposed the use of archival methods to foster faculty ethics [4]. Based on research findings from U.S. universities, this paper organizes the design and evaluation of faculty teaching portfolios into four areas: teacher involvement in the design process, qualitative data collection and management, the creation of clear evaluation criteria, and the preparation for evaluating teaching portfolios. In conclusion, from the perspective of establishing a sustainable faculty ethics system, four key insights are provided for managing teaching portfolios in Chinese universities.

2. University Faculty Teaching Portfolios

The teaching portfolio serves as a record of teaching behavior, providing "authentic evidence" of a teacher's instructional work. The concept of teaching portfolios for university faculty originated in Canada in the 1980s. At that time, teachers were dissatisfied with using traditional teaching evaluations as the sole measure of their professional performance. They sought additional evidence to demonstrate the work they had done in teaching and the results they had achieved. Consequently, they developed the "teaching portfolio". Teaching portfolios, also known as teaching dossiers, became an essential tool for evaluating the educational "performance" of university professors [5]. The creation of teaching portfolios is valuable not only for improving teaching abilities and promoting student learning but also as tools and evidence for higher education institutions and faculty members to demonstrate their societal responsibilities. Depending on their purpose, university faculty teaching portfolios can be classified into four types:

1) The traditional teaching portfolio, which records teaching activities.
2) The classroom teaching portfolio, which focuses specifically on recording and tracking classroom teaching activities.
3) The academic portfolio, which spans a broader timeframe and includes the three primary responsibilities of university faculty — research, teaching, and social engagement.
4) With the advent of the digital age, electronic portfolios have become increasingly popular. These portfolios are created using various online information tools.

As a teaching management tool that has gained significant popularity over the past two decades, electronic portfolios are increasingly being used by individual teachers, educational institutions, communities, and schools in the United States to manage faculty teaching behaviors. Similar to traditional portfolios, electronic portfolios assist students in reflecting on their learning behaviors, enhancing their awareness of learning strategies, and identifying learning needs. A comparative study by M. Van Wesel and A. Prop found that, in the same context, electronic portfolios lead to better learning outcomes compared to traditional paper-based portfolios. In the realm of higher education management, teaching portfolios are commonly recognized as a management tool and an effective means for evaluating faculty teaching and research performance. Depending on the evaluation objectives, teaching portfolios can support tasks such as personal assessments, daily teaching, and promotion evaluations. The use of electronic teaching portfolios in universities can broaden the types of "authentic evidence" related to teaching, research,

and professional ethics, while simultaneously improving the efficiency of university archive management through enhanced storage methods [6].

3. Educational Evaluation and Teacher Teaching Portfolios

The concept of the teaching portfolio originally referred to students' learning portfolios, reflecting the idea that "learning is a process, and the evaluation of learning should also be a process-based assessment". Since assessment occurs alongside learning, the results can not only enhance teaching and learning but also provide teachers with a solid foundation for evaluating students' progress [7].

American psychologist Howard Gardner, who developed the theory of multiple intelligences, argued that portfolios are an effective way to assess the learning journey across different intelligences, particularly for skills that cannot be evaluated through standardized tests, such as artistic abilities. Consequently, he introduced portfolios into Harvard University's "Zero Point Project". As this project spread throughout the U.S., more schools and disciplines began to explore the use of teaching portfolios and adopted the portfolio assessment method to evaluate student learning.

In the past decade, the concept of the teaching portfolio has expanded into teacher education at U.S. universities. Many teacher training programs in the United States now include instruction on how to prepare teaching portfolios. The National Board for Professional Teaching Standards has even developed evaluation criteria for teacher portfolios as part of the teacher certification process. Over 400 universities in the U.S. now use teaching portfolios as a basis for hiring decisions, acknowledging that they provide a valuable reflection of a faculty member's teaching quality and level.

The widespread adoption of teaching portfolios in U.S. higher education can be attributed to several factors. One key reason is the high priority placed on teaching quality within American higher education. The complexity of teaching requires a comprehensive approach to evaluating instructional effectiveness, and teaching portfolios meet this need. Additionally, teaching portfolios offer concrete, visible evidence for faculty rewards and evaluations. Furthermore, by including a teacher's self-reflection on their teaching philosophy, portfolios provide educational administrators with insight into the educator's pedagogical values. Teachers also benefit from creating portfolios, as they can use them to showcase their teaching strengths, achievements, and educational ideals, as well as for self-reflection, professional development, and peer collaboration.

The electronic teaching portfolio maximizes the potential and functionality of traditional teaching portfolios. First, it simplifies the organization and archiving of materials, making retrieval and search easier. Second, the internet provides a platform to showcase teachers' electronic portfolios, enabling materials to be used not only privately but also shared, viewed, and commented on by others. Consequently, using electronic teaching portfolios offers more than just tracking personal development, as it fosters mutual learning and inspiration.

Teaching management units have recognized that once teachers create electronic portfolios online, they not only provide a foundation for evaluations, awards, and teaching management but also facilitate smoother transitions between new and experienced teachers. This widespread recognition of the benefits of electronic teaching portfolios has contributed to their successful implementation in the United States.

4. Design and Evaluation of Faculty Teaching Portfolios in U.S. Universities

4.1. Teacher Involvement in the Design Process

From the perspective of fairness to faculty members, before professors in U.S. universities officially begin compiling their teaching portfolios, the standards for evaluating their teaching have already been carefully defined. When setting evaluation criteria for teaching portfolios, two key factors should be considered:

First, if the criteria are developed collaboratively within a department, they should be practical and closely tied to the department's or college's definition of effective teaching. Second, the criteria must align with the institution's educational goals. For example, at Philadelphia Community College, the teaching department's goal is to help students transition from two-year to four-year colleges. Therefore, the evaluation standards should assess whether the instructor has effectively supported this transition. Similarly, if the goal of the MBA program at the Wharton School of the University of Pennsylvania is to cultivate future business leaders, the criteria should evaluate whether the instructor has effectively contributed to shaping such leaders.

4.2. Collection and Management of Qualitative Data

In any evaluation system, the type of evidence and the evaluation methods used depend on the evaluation objectives. Summative evaluations must provide conclusions that lead to an assessment. In other words, summative evaluations should add both scores and significance to the evaluation results. On the other hand, formative evaluations, which do not assign scores, focus on analyzing how specific techniques and strategies have been effectively implemented. Therefore, it is essential to first consider how teaching portfolios should be used, and then think about and decide how to evaluate them.

According to research findings, U.S. institutions have a clear understanding of the purposes of teaching portfolios: good teaching cannot be accurately defined and assessed. Feedback from faculty members is often quite representative. When teaching portfolios are used as a tool to improve teaching, the credibility or effectiveness of the evaluation process is not the most important consideration; rather, improving teaching is the primary goal. Every step in the design of a teaching portfolio must emphasize the importance of improving teaching, at least as much as it emphasizes the importance of the portfolio itself. However, if the portfolio is used for summative evaluation (such as personnel assessments), then the credibility and effectiveness of the evaluation process become crucial. Designing a reliable and effective evaluation method is quite challenging because teaching portfolios contain a large amount of both qualitative and quantitative data, and evaluating qualitative data is inherently subjective.

Despite the frequent discussions in institutions about teaching portfolios, issues such as the fact that U.S. promotion committees often evaluate faculty based solely on objective and quantitative data — leading to incorrect judgments — are commonly raised. Additionally, decisions regarding faculty personnel in higher education are often based on qualitative materials about teaching. Essentially, most promotion committees at U.S. universities assess candidates' teaching, research, and publications. Although administrators are often reluctant to admit it, during these contentious stages, they typically rely on qualitative evaluations. Moreover, these evaluations are usually not based on clearly defined standards agreed upon by the general public, nor do they depend heavily on the objective beliefs of any one individual within the promotion committee or the administration. The introduction of teaching portfolios has not increased the objectivity of the evaluation process; rather, by adding more documentation of teaching quality, teaching portfolios have contributed to improving the evaluation process.

4.3. Designing Clear Evaluation Criteria

In the design of summative evaluations for teaching portfolios, the first step is to determine the evaluation criteria and the evaluators. The second step involves ensuring that the portfolio's content is accurately and clearly defined. Faculty members, especially those within a department, should provide support for these two aspects. The content of the portfolio and the evaluation criteria are closely aligned with the department's management requirements and the institution's development goals. When teaching portfolios are used as part of summative evaluation documentation, the minimum scope of content

is often specified. Colleges and universities may also set limits on the content of the portfolio, such as the length of each section. With these basic content requirements and set limitations, creativity may be constrained, but it provides a platform for comparison among faculty members.

When designing the overall evaluation criteria for teaching portfolios that aim to reveal teaching quality, the evaluation committee should ask several key questions:

1) Is the presented evidence authentic, and not just reflective statements?
2) Do the reflective statements clearly include reasons and content related to the course syllabus, students, and peer evaluations?
3) Is there evidence to demonstrate student learning outcomes, and is it more than just data obtained from others or self-reports?
4) Can the evaluation report reflect efforts to improve performance?

These questions provide a standard for completing the evaluation of teaching portfolios, but evaluators also need to design evaluation criteria for the specific documents within the portfolio. The following five questions can help guide the design:

1) What is the quality of the teaching materials used in the instructional process?
2) What knowledge goals were set for students (did the instructor successfully help students set their own learning standards), and how did the students perform?
3) How well does the instructor understand the subject matter they are teaching?
4) Has the instructor taken responsibility for understanding the teaching goals of their department or institution?
5) To what extent has the instructor worked toward teaching excellence?

These two sets of questions provide a starting point for schools to design more specific evaluation criteria. While it is best for these standards to align with the specific educational goals of the institution, two important considerations must be kept in mind: Active and widespread involvement of faculty members in the design of evaluation standards is essential for developing a system that takes both institutional policies and educational goals into account. The establishment of standards should aim to avoid an overemphasis on easily quantifiable aspects of teaching. At many institutions, faculty members are increasingly frustrated with the reliance on data (such as student evaluations, publication counts, and grants) as the sole basis for summative evaluations.

After establishing clear standards, the next step is to determine the expected level of achievement. The evaluation criteria should describe as clearly as possible the completion status at each level. For example, stating that "4" equals perfect performance and "1" equals poor performance does not provide clear information to the evaluator and does not help the teacher understand how and why the evaluation was given. Teachers should have the right to know in advance how they can achieve a particular level of performance. If they have not successfully reached a higher level, they have the right to understand what they failed to do. For example, if an evaluation criterion for a teacher concerns the course syllabus, the rating standard should include:

1) The teacher does not have a course syllabus.
2) The teacher provides the syllabus from the previous semester, but it includes outdated or inaccurate information, such as incorrect dates or references.
3) The teacher provides a syllabus that only includes content from the course catalog or a basic course outline.
4) The teacher provides a complete syllabus, including course description, teaching objectives, class schedule, office hours, basic grading criteria, assignment schedules, due dates, and other essential course information.
5) The teacher provides all of the above, with additional detailed explanations, such as how the grading criteria work, how to prepare for exams, the objectives of each assignment, and how the course aligns with departmental or institutional educational goals.

The selection of each evaluation criterion depends heavily on the culture and values of the college or university. Therefore, involving faculty members in the process of designing these standards is essential — not only for the acceptance of the criteria but also to ensure their effectiveness.

Some individuals are hesitant to adopt clear standards as a method of evaluation, citing the "soul crisis" argument, as schools increasingly rely on clear, measurable evaluation standards. On the other hand, using defined standards is seen as a "fair play" approach. However, this approach might lead to certain undesirable behaviors among faculty. Clear standards may encourage faculty members to focus solely on meeting the criteria for evaluation rather than the true purpose behind the behavior.

For example, if effective teaching is defined as "providing students with timely reference materials", then faculty members with intrinsic motivation would naturally read many resources and consider the needs of students. However, after implementing clear standards, we can imagine some teachers might focus solely on citing the most recent references without thoroughly reviewing the materials. In fact, we can even imagine that faculty motivated by external factors could simply provide timely references based on book covers and literature summaries rather than genuinely engaging with the material.

Although some teachers may attempt to exploit the system's weaknesses to achieve undesirable goals, it is unlikely that a teacher could consistently fabricate their entire teaching portfolio. However, teaching portfolios may indeed contain some non-authoritative materials, such as reference materials derived from book covers and literature summaries. While some of these materials may be more difficult to fabricate, the majority of the content is harder to falsify. If a teacher were to fabricate a series of teaching materials in their portfolio, they would struggle to maintain their work throughout the course. Additionally, other faculty members would inevitably identify the gaps in their work. When a course lacks substantive content, it becomes extremely difficult for a teacher to create a credible presentation of that content.

4.4. Preparation for Teaching Portfolio Evaluation

When conducting a summative evaluation of teaching portfolios, determining who evaluates the portfolio is crucial. There are many possibilities, but when the purpose is significant (such as for promotion or tenure), U.S. universities may train a small group of highly skilled portfolio evaluators. These evaluators may specialize in specific areas but would not be responsible for evaluating the entire teaching portfolio. When a team of highly trained evaluators is tasked with evaluating portions of the teaching portfolio, it can lead to fragmented evaluation reports. Effective teaching is a complex behavior that involves not only different variables but also the interactions between these variables. Attempting to evaluate teaching in a fragmented manner can obscure these relationships. In fact, "holistic evaluation is more useful than a finely designed scoring system". Some have found that such detailed scoring systems can turn the teaching portfolio evaluation into a mechanical task.

Choosing who will evaluate the teaching portfolio is an essential step in ensuring the reliability of the evaluation results. Selecting evaluators comes with certain risks, such as the potential for too close a relationship between the evaluator and the individual being evaluated. Another consideration is the training of evaluators. Some faculty members develop their teaching style through personal exploration, but this individual experience may not provide enough of a professional perspective for evaluating teaching portfolios. Evaluators should be familiar with different teaching styles and methods to assess teaching effectiveness. Therefore, some level of study focused on teaching evaluation and related documentation is necessary.

Additionally, consistency in evaluation is crucial in summative assessments. Consistency requires evaluators to use the same standards when evaluating different teaching

portfolios and to reach consistent conclusions. Different evaluators should be able to provide similar evaluations of the same portfolio. Training evaluators can improve the reliability of the evaluation process and enhance inter-rater reliability.

5. Conclusion

5.1. *Evidence-Based Thinking: The Basic Principle of Building Teacher Ethics in Universities*

Teaching portfolios are an objective record of a teacher's educational and instructional work. A comprehensive and realistic teaching portfolio should dynamically reflect aspects such as the teacher's teaching status, teaching abilities, professional ethics, and psychological qualities. Establishing and designing teaching portfolios that are truly linked to faculty promotions, job advancements, and awards is fundamentally a measure to standardize teachers' professional conduct. This process helps internalize ethical concepts in teaching, which ultimately leads to a tangible improvement in teacher ethics.

5.2. *People-Centered Approach: Self-Evaluation to Enhance Teacher Autonomy and Engagement*

One of the key characteristics of teaching portfolio evaluation is its emphasis on teacher autonomy. Through the analysis and diagnosis of the portfolio's content, teachers can improve their self-reflection skills. In today's education model, influenced by the "people-centered" approach, teaching portfolios reflect respect for and recognition of the value of teachers. This philosophy should be fully integrated into teacher evaluation, making teachers the primary participants in the process.

A typical expression of emphasizing the teacher's central role is the promotion of self-evaluation. Self-evaluation is closely linked to self-reflection, self-monitoring, and self-improvement. During the self-evaluation process, teachers collect data about their own teaching, make judgments, reflect on their practices, and consider ways to improve. By gaining insights from different perspectives, teachers can identify weaknesses in their fundamental competencies, discover areas for improvement in their educational practices, and set a clear direction for their professional development. This approach greatly enhances teachers' motivation and creativity, which is highly beneficial for improving their work efficiency and teaching quality.

5.3. *Integrating Formative and Summative Evaluation: Enhancing the Scientific Rigor of Assessment*

The evaluation of teaching portfolios in U.S. universities integrates both quantitative and qualitative assessment methods, making the process more rigorous and scientific. A study found that the correlation between peer evaluations, administrative evaluations, and student performance assessments was very low. Such discrepancies often leave teachers feeling uncertain about their performance. Therefore, it is essential to establish clear evaluation standards. These standards not only enhance the scientific validity of the evaluation process but, more importantly, provide teachers with clear directions and objectives for improvement.

Maxwell argues that evaluation should be "reasonable" rather than simply "correct". Teacher evaluation models that promote professional development emphasize recognizing individual differences. U.S. universities tailor evaluation criteria and methods based on teachers' diverse backgrounds, encouraging them to leverage their strengths and adopt a personalized approach to assessment.

In practice, effective evaluation standards should be refined through continuous testing and iteration to ensure their specificity. Additionally, they should be tested across various teaching contexts to confirm their applicability. Striking a balance between well-defined criteria and individualized evaluation helps make the assessment process more scientific, fair, and just.

5.4. Attention to Detail: Preparing Evaluators before the Assessment Process

U.S. universities, when using teaching portfolios for faculty evaluation, focus not only on individual teacher performance but also on the future development of both the teacher and the institution. This reflects a shift toward a new perspective on faculty evaluation, representing the future direction of the field. The emerging model places teaching portfolios at the center, emphasizing self-evaluation while integrating feedback from administrators, colleagues, and students. This approach encourages teachers to develop a strong sense of self-awareness, fostering a realistic and active role in their own professional growth. Ultimately, this evaluation model promotes both faculty professional development and student learning progress, making the assessment process more comprehensive and forward-looking.

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