

Current Status of Reflection and Professional Competence Enhancement Among University Teachers

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Abstract: *This study takes the current status of reflection among university teachers as a starting point, delving into the intrinsic relationship between teacher reflection and professional development. By employing a mixed-methods approach that combines qualitative and quantitative research, this study investigates the levels of reflection among university teachers and their influencing factors. The survey results indicate the following: 1. The overall level of reflection among university teachers is relatively good, but inconsistencies are observed across various dimensions (practical, cognitive, moral, emotional, metacognitive, critical). 2. The level of reflection among university teachers is significantly correlated with factors such as teacher burnout, autonomy, job performance, and trait coping styles. Finally, the study proposes recommendations on how to promote teacher professional development by improving the current state of reflection, aiming to provide theoretical support and practical guidance for the development of university teaching staff.*

Keywords: University teachers, Teacher reflection, Professional competence.

1. Introduction

China's renowned psychologist Professor Lin Chongde once proposed the following: Excellent teachers = teaching process + reflection [1]. This finding coincides with the American psychologist Posner's assertion that "growth = experience + reflection" [2]. Teacher reflection helps educators identify teaching issues more promptly, improve teaching methods, and enhance instructional effectiveness; it also aids in clarifying research directions and enhancing teachers' innovative research capabilities. Additionally, it increases teachers' sense of professional value and subjective well-being. In 2015, Guo Cheng and Jiang Xue [3] conducted a study on the reflective characteristics of primary and secondary school teachers and experimental interventions. Building on this foundation, the current research employs quantitative and qualitative methods to explore the status of university teachers' reflections and their relationships with teacher autonomy, job burnout, work performance, etc. This research aims to develop strategies from both internal and external dimensions to enhance teachers' reflective abilities, thereby providing robust support for the improvement of their professional competencies.

2. Research Objectives

This study focuses on university teachers' reflective abilities. Through methods such as questionnaires and structured interviews, both online and offline, the current status, issues, and influencing factors of university teachers' reflective capabilities are investigated, and targeted enhancement strategies are proposed.

3. Research Tools

3.1 Questionnaire Survey Method

1) Teacher Reflection Scale

The revised Teacher Reflection Scale, consisting of 23 items

across six factors—ethics, practice, cognition, emotion, critique, and metacognition—was adopted. Validation analysis demonstrated good reliability and validity of the scale.

2) Teacher Burnout Questionnaire

The questionnaire comprises 22 items across three dimensions: personal accomplishment, depersonalization, and emotional exhaustion. It employs a 7-point rating system, where respondents self-assess the frequency of each symptom from 0 to 6, indicating increasing symptom frequency.

3) Teacher Autonomy Questionnaire

Developed by Meng Xiaolei et al. [4] in 2010, this 22-item questionnaire uses a 5-point scoring system and includes three dimensions: self-development, self-assertion, and self-direction. It has good construct and content validity, with an internal consistency coefficient of 0.831.

4) Trait Coping Style Questionnaire

This 20-item questionnaire employs a 5-point scoring system covering two aspects: positive coping (PC) and negative coping (NC). It assesses respondents' positive and negative attitudes and related behavioral characteristics when facing difficulties and setbacks. The Cronbach's alpha coefficients for PC and NC were 0.70 and 0.69, respectively. The correlation coefficient between NC and PC was -0.09, indicating a low correlation.

5) Teacher job performance scale

The scale was developed by Cai Yonghong and includes two dimensions: task performance and relational performance. The scale uses a 5-point scoring system, with "always" scored as 5 points, "mostly" as 4 points, "occasionally" as 3 points, "mostly not" as 2 points, and "never" as 1 point. The internal consistency values of the relational performance and task performance subscales and the total scale were 0.907 and

0.890, respectively.

3.2 Structured Interview Method:

A self-designed interview outline was used to investigate the difficulties and confusion faced by university teachers before, during, and after teaching through preliminary and follow-up surveys.

4. Research Subjects

University teachers (represented by some teachers from six universities in Sichuan Province)

5. Research Methods and Statistical Analysis Approaches

In this study, questionnaires were distributed to 200 university teachers from six universities in Sichuan Province through a combination of online and offline methods. After collection and organization, 178 valid questionnaires were obtained. Additionally, 17 structured interviews were effectively conducted through video or offline methods. The collected data were statistically analyzed via SPSS 21.0 to examine the current status, existing issues, and influencing factors of university teachers’ reflective abilities, and quantitative conclusions were drawn to propose strategies for enhancing their reflective capabilities.

6. Research Findings

6.1 Overall Level of Reflection among University Teachers

The survey questionnaire results revealed that, overall, university teachers have a good level of reflection. Among the 178 teachers, the average reflection score was $M = 3.35$, which was higher than the theoretical average of 3 on the questionnaire. The difference test compared with the theoretical mean yielded $T = 21.01$ and $P = 0.001$, indicating a highly significant difference. The specific details are shown in Figure 1.

Table 1: Overall reflection levels of university teachers

N	Mean (M)	Standard Deviation (SD)	T test	P
178	3.35	0.45	21.01***	0.000

Note: * indicates significance at the 0.05 level, ** at the 0.01 level, and *** at the 0.001 level.

6.2 Basic Levels of University Teachers’ Reflections Across Dimensions

According to the survey results, university teachers’ reflection levels are generally good across dimensions, with certain differences between specific dimensions: the moral dimension ranks highest, followed by the emotional dimension, and the critical dimension is the lowest. Detailed information is provided in Table 2.

Table 2: Basic Levels of University Teachers’ Reflections across Dimensions

Dimension	N	Mean ± Standard Deviation (M±SD)	T test	P
Dimension 1	178	4.18±0.68	48.87***	0.000

(Morality)				
Dimension 2 (Critique)	178	2.67±0.79	-11.68***	0.000
Dimension 3 (Cognition)	178	2.94±0.67	-2.62**	0.009
Dimension 4 (Emotion)	178	3.51±0.67	21.19***	0.000
Dimension 5 (Metacognition)	178	3.31±0.69	12.70***	0.000
Dimension 6 (Practice)	178	3.49±0.64	21.29***	0.000

Note: * indicates significance at the 0.05 level, ** indicates significance at the 0.01 level, *** indicates significance at the 0.001 level.

6.3 A Study on the Correlations of Reflective Levels among University Teachers

Analysis of the survey results reveals that the reflective levels of university teachers are significantly associated with teacher burnout, teacher autonomy, teacher job performance, and trait coping styles. Teacher reflection is significantly negatively correlated with trait coping styles and teacher burnout but significantly positively correlated with teacher autonomy and teacher job performance. The details are presented in Table 3.

Table 3: Correlations among Teacher Reflection, Teacher Burnout, Teacher Autonomy, Teacher Job Performance, and Trait Coping Style among University Teachers

Category	Teacher Job Performance	Teacher Autonomy	Teacher Burnout	Trait Coping Styles
Teacher Reflection	0.427**	0.446**	-0.315**	-0.217**

6.4 Structured Interview Results on the Importance of Teacher Reflection

- Statistical analysis revealed the following results:
- 1) Reflection is crucial for teachers’ professional growth.
University teachers generally believe that reflection is essential for improving their teaching standards and achieving self-growth. In 2011, the Ministry of Education issued the “Teacher Education Curriculum Standards (Trial)” [5], which states that teachers are reflective practitioners who achieve professional development by researching their own experiences and improving educational practices. Reflective teaching ability is among the competencies that modern high-quality professional teachers must possess. All 17 interviewed teachers agreed on the importance of reflection, emphasizing that every educator should actively engage in reflection for professional growth.
 - 2) The content of teacher reflection is relatively limited.
Reflections predominantly focus on specific teaching aspects (content, methods, environment, strategies, etc.), with less attention given to the pre- and postteaching phases, resulting in insufficient reflection during actual teaching practices. The scope of reflection is often confined to immediate students and personal experiences, leading to narrow content.
 - 3) Differences exist in reflection levels and forms among teachers of varying categories.
Through the classification and analysis of the interview results, it was found that teachers with more teaching

experience and higher professional titles place greater emphasis on reflection and have more specific reflective measures, such as writing teaching reflection journals, case discussions, postclass summaries, teaching summaries, case studies, classroom observations, reflection notes, and reflection diaries.

7. Research Conclusions

7.1 The Overall Level of Reflection among University Teachers is Good

The overall level of teacher reflection is relatively high, slightly above the theoretical average. This phenomenon can be attributed to multiple driving factors. First, professional standards for teachers have continuously improved with social transformation and the deepening of educational reforms. Societal expectations for teachers' professional competencies have shifted from mere knowledge dissemination to the development of multifaceted abilities. Second, the practical environment for teacher reflection is consistently enhanced, with reflection being regarded as a crucial method for improving professional competence. An increasing number of teachers and educational researchers are focusing on teachers' reflective processes. Third, teachers' own reflective awareness has gradually strengthened, leading to an overall improvement in reflection levels.

7.2 There are Certain Differences in the Reflective Levels of University Teachers Across Various Dimensions

The reflective abilities across various dimensions exhibit certain differences among university faculty. Specifically, the mean values of teachers' moral reflection, metacognitive reflection, emotional reflection, and practical reflection are significantly greater than the theoretical benchmarks, indicating that teachers have developed relatively mature reflective mechanisms in areas such as professional ethics, self-monitoring, emotional regulation, and instructional improvement. However, the mean values of the critical reflection and cognitive reflection dimensions are significantly lower than those of the theoretical benchmarks are, reflecting noticeable gaps in teachers' depth of theoretical critique and knowledge construction capabilities. This differentiated performance can be attributed to the phased characteristics of teachers' reflective development: current reflective practices among teachers predominantly focus on the technical-rational level, emphasizing the optimization of teaching methods and the enhancement of teaching efficacy without yet transcending the boundaries of professional practice.

7.3 There are Significant Correlations Between University Teachers' Reflection and Teacher Autonomy, Teacher Burnout, Teacher Job Performance, and Trait Coping Styles.

1) University teachers' reflections are positively correlated with teacher autonomy and job performance. The reasons for this are twofold: On the one hand, through reflection on teaching behaviors and processes, teachers strengthen their sense of control over professional competencies and value recognition, thereby proactively breaking free from teaching

inertia—teacher reflection is essentially a manifestation of teacher autonomy. On the other hand, teacher reflection aids in accurately identifying instructional issues and iteratively refining strategies (e.g., improving classroom interactions and enhancing assessment methods), forming a virtuous cycle of “practice reflection improvement,” ultimately leading to a spiral increase in teaching efficiency. Consequently, enhancing teacher reflection also contributes to improved job performance.

2) There is a negative correlation between university teachers' reflections and job burnout. When teachers engage in active reflection, they proactively examine the strengths and shortcomings of their teaching practices and continuously explore more effective teaching strategies and methods. This process not only contributes to improving teaching quality but also allows teachers to gain a sense of achievement and satisfaction in their professional growth, thereby effectively alleviating feelings of job burnout. Conversely, the emergence of teacher burnout often stems from long-term work pressure, a lack of achievement, and other factors. These negative factors weaken teachers' motivation and enthusiasm for reflection; hence, there is a negative correlation between teacher reflection and job burnout. The more reflective a teacher is, the lower their sense of job burnout.

3) There is a negative correlation between university teachers' reflections and their trait coping styles. Teachers who are adept at reflection often possess stronger self-awareness and can flexibly adjust their mindset and behavior on the basis of actual circumstances. They tend to adopt positive, rational trait coping styles to face work-related pressures and challenges rather than falling into cycles of passive coping. Therefore, the more emphasis teachers place on reflection, the more likely they are to employ proactive coping strategies. Thus, teacher reflection, job burnout, and trait coping styles influence one another, collectively forming a significant negative correlation.

7.4 The Level of Reflection among University Teachers is Influenced by Numerous Factors.

The interview results indicate that the level of reflection among university teachers is influenced by personal autonomous awareness, reflection content and methods, the arbitrariness of the reflection process, and reflection forms. Among the influencing factors of university teachers' reflection levels, personal autonomous awareness plays a key leading role. Teachers with strong autonomous awareness are more proactive in pursuing professional growth and actively enhancing their teaching and research capabilities. The reflection content and methods serve as important support. Focusing precisely on teaching issues and adopting scientific and effective reflection methods can help teachers analyze and improve their teaching. The arbitrariness of the reflection process is a hindering factor. Excessive arbitrariness can make reflection lack systematicity and coherence, making it difficult to form effective experiences. The reflection form is equally crucial. Diverse forms of reflection, such as teaching journals and peer exchanges, provide teachers with different perspectives, assisting them in comprehensively examining their teaching. These aspects collectively influence the level of reflection among university teachers.

8. Strategies to Enhance University Teachers' Reflective Ability

Teacher reflection is crucial. From the perspective of teacher autonomy, it encourages teachers to actively examine their teaching behaviors and strengthen their self-decision-making and control capabilities. With respect to teacher burnout, reflection helps teachers address confusion and stressors in their work, adjust their mindset in a timely manner, and avoid falling into burnout. In terms of teacher job performance, reflection assists teachers in identifying teaching shortcomings and making improvements, thereby enhancing teaching quality and effectiveness. From the perspective of coping strategies, reflection enables teachers to address teaching challenges with more rational and positive attitudes, continuously optimizing educational strategies to achieve professional growth. The following approaches can be used to improve university teachers' reflective ability:

8.1 Two-pronged Approach: Creating a Positive Atmosphere and Environment for Reflection

School level: Actively promoting a culture of reflection by formulating relevant policies, conducting promotional activities, and other methods to help teachers recognize the importance of reflection, fostering an atmosphere that encourages reflection and tolerates trial and error. Provide resource support: Learning resources such as educational books, journals, online courses, etc., to broaden horizons and acquire new educational concepts and methods. Establishing incentive mechanisms: Recognizing and rewarding outstanding teachers to stimulate their enthusiasm for reflection.

Teacher level: Teacher communities should be formed to create collaborative environments where teachers support each other through professional knowledge, reflection groups should be established to conduct peer assistance activities regularly, teachers should be encouraged to observe each other's classes, feedback should be provided, and honest communication should be engaged in after class observations.

8.2 Practical Exercises: Strengthening Reflection Methods and Skill Training

Case demonstrations: Analyze excellent teaching reflection cases to help teachers intuitively understand the specific content and forms of reflection. For example, select reflection journals or case analysis reports from renowned teachers; organize studies and discussions; and learn how to identify, analyze, and solve problems in teaching practice.

Simulation training: Conduct reflection simulation activities in simulated teaching scenarios. For example, specific teaching problem scenarios should be set up, teachers should play different roles, and reflection and response strategies should be used to enhance reflective abilities.

8.3 Innovation Through Renewal: Further Enriching the Content and Forms of Reflection

Reflection Content: Conduct reflection comprehensively throughout the entire process. Integrate teaching philosophy,

objectives, methods, processes, and outcomes into every stage of reflection; delve deeply into reflection from practical, cognitive, ethical, emotional, metacognitive, and critical dimensions; and extend the timing of reflection from "during teaching" to "preteaching" and "postteaching".

Reflection Forms: Experiments with diverse reflection formats. Teaching Journals: Teachers record daily or weekly teaching experiences, feelings, and reflections; Case Analysis: Select exemplary teaching cases for in-depth analysis and reflection; Action Research: Teachers conduct action research to address practical teaching challenges, among other approaches.

8.4 Robust Mechanisms: Establishing Reflection Feedback and Evaluation Systems

Self-Evaluation Mechanism. Teachers can develop personalized reflection criteria on the basis of their teaching goals and outcomes. Students regularly self-assess their teaching reflections to verify alignment with these criteria, identify gaps or shortcomings, and make timely adjustments and improvements.

Peer evaluation mechanism: Student feedback: Collect students' opinions and suggestions on teaching through surveys, discussions, and other methods to understand their learning needs and experiences. Peer Observation: Invite colleagues to observe classes, provide evaluations, and share insights and recommendations for teaching enhancement.

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