

The Interaction between Teacher Identity and Language Metacognitive Ability

Muyang Ding

Universiti Malaya, 50603 Kuala Lumpur, Wilayah Persekutuan Kuala Lumpur, Malaysia

Abstract: This paper explores the dynamic interaction between teacher identity and metacognitive competence in the second language classroom. Through classroom observation and in-depth interviews, it is found that there is a two-way promotion relationship between teachers' cognitive reconstruction of professional roles and metacognitive reflection: stable identity provides value orientation for metacognitive activities, while high-level language metacognitive ability promotes teachers to break through the traditional role framework. The co-evolution of the two forms a spiral professional development path, which has important implications for optimizing the teacher education system. The study reveals that teachers need to integrate cognitive ability and professional identity in practice and reflection in order to achieve teaching concept innovation and professional growth.

Keywords: Teacher identity, language metacognitive ability, second language classroom.

1. Introduction

As the core driving force of social development, education has always been closely linked with the evolution of human civilization. As the main body of educational practice, teachers' professional quality and cognitive ability directly affect the quality of education and the direction of personnel training [1]. In recent years, with the continuous expansion of educational research perspectives, teacher identity and language metacognitive ability have gradually become an important issue of academic concern. Teacher identity involves the internalization and reconstruction of their professional roles, values, and social expectations, while language metacognitive ability refers to teachers' systematic reflection and regulation of language knowledge. In the process of teachers' professional development, they not only interweave with each other, but also act on teaching practice together, but the specific mechanism and dynamic characteristics of their interaction still need to be explored in depth. At present, the construction of teacher identity is no longer limited to the solidified cognition of traditional professional roles, but needs to keep pace with the dynamic development of educational needs. At the same time, as an important part of teachers' professional quality, language metacognitive ability not only affects the scientificity, and innovation of teaching design, but also shapes teachers' perception and recognition of professional mission at a deep level [2]. However, the existing studies tend to explore these two dimensions independently, or only focus on the one-way influence relationship, ignoring the dynamic interaction between them in the field of practice. The formation of teacher identity is not only restricted by individual cognitive ability, but also provides internal impetus for the improvement of cognitive ability. This study focuses on the interaction between teacher identity and language metacognitive ability, and attempts to reveal the dynamic process of their interaction and its deep significance for teacher professional development. This exploration not only helps to improve the theoretical system of teacher professional development, but also provides a theoretical basis for optimizing teacher training mode and improving

teaching quality.

2. Concepts of Teacher Identity and Language Metacognitive Competence

2.1. Teacher Identity

Teacher identity is one of the core concepts in the field of education. It points to teachers' cognition and orientation of their professional role, value attribution and social function. This concept is not a static label, but a dynamic psychological schema gradually constructed by teachers through reflection and practice in the continuous interaction with educational environment, student groups and social culture. The formation of teacher identity includes not only the individual's self-questioning of "who I am", but also the exploration of "what kind of teacher I should be". It is not only shaped by personal educational beliefs, teaching experience and professional ability, but also closely related to the expectations of society for the role of teachers, the orientation of educational policies and the potential influence of cultural traditions. In essence, teacher identity is a process in which teachers integrate their external professional norms with their intrinsic value pursuit, which requires teachers to actively accept their professional mission and constantly adjust their self-perception in practice to adapt to the changes of educational ecology. From the perspective of composition, teacher identity includes three levels. One is the functional identity of professional role, that is, the cognition and execution of teachers' basic responsibilities such as teaching tasks, classroom management and knowledge imparting, the other is the emotional identity, which involves teachers' love for their profession, their concern for students and their sense of belonging to the cause of education. The third is value identity, which is embodied in teachers' deep understanding of the significance of education, their social responsibility for knowledge transmission, their ethical commitment to students' all-round development and their conscious practice of educational equity. These three levels do not exist in isolation, but penetrate each other through specific situations in teaching practice [3].

From the perspective of educational practice, the stability of teacher identity directly affects their teaching behavior and professional development motivation. When teachers have a clear understanding of their roles and values, their teaching objectives are more directional, their teaching strategies are more creative, and they are more resilient in the face of challenges. Therefore, understanding the connotation and generation mechanism of teacher identity not only helps to reveal the internal logic of teachers' professional growth, but also provides a theoretical basis for optimizing the teacher education system and improving the overall quality of teachers.

2.2. Language Metacognitive Ability

Language metacognitive ability is an indispensable cognitive dimension in teachers' professional quality, which goes beyond the simple mastery of language knowledge and points to teachers' systematic monitoring, reflection, and regulation of their own language cognitive process. This concept originates from the extension of metacognitive theory in the field of education, which emphasizes that teachers not only need to use language to complete teaching tasks, but also need to examine the nature of language learning, the rationality of teaching strategies and the deep relationship between language and culture from a critical perspective. The core of language metacognitive ability lies in teachers' dual awareness of "how to think about language" and "how to teach language", which includes not only the abstract analysis of language structure, function, and law, but also the ability to dynamically evaluate and optimize cognitive strategies in language teaching practice. From the perspective of connotation, language metacognitive ability includes three interrelated levels. One is the metacognition of language system itself, that is, teachers can jump out of specific language phenomena and understand the generative mechanism of language from the macro level of grammatical rules, pragmatic logic, or social and cultural context, and the other is the metacognition of language learning process, involving teachers' insight into students' cognitive characteristics, grasp of language acquisition rules and pre-judgment and intervention of learning obstacles. The third is the metacognition of language teaching behavior, which requires teachers to adjust the cognitive framework based on feedback in teaching design, classroom interaction and effect evaluation [4]. These three levels together constitute the three-dimensional structure of teachers' language metacognitive ability, which enables them to balance the dual objectives of language knowledge imparting and cognitive ability training in complex teaching situations.

The particularity of language metacognitive ability lies in its dynamic and situational dependence. On the one hand, teachers need to use different cognitive strategies flexibly according to the differences of teaching objects, subject content, and cultural background. On the other hand, the development of language metacognitive ability is not a linear accumulation, but a repeated cycle with the deepening of teachers' professional experience and the renewal of educational ideas. This dynamic feature makes language metacognitive ability not only a tool for teachers to cope with teaching challenges, but also an internal driving force for their professional growth.

3. Interaction between Teacher Identity and Language Metacognitive Ability

3.1. The Influence Mechanism of Teacher Identity on Language Metacognitive Ability

Teacher identity, as the cognitive framework of the individual's professional role, has a profound effect on the formation and development of language metacognitive ability by shaping the teacher's thinking mode and action orientation. This kind of influence is not a simple one-way transmission, but penetrates the process of teachers' reflection, planning and regulation of language teaching through the value orientation, emotional input and practical consciousness contained in identity. When teachers have a clear definition of their professional identity, their metacognitive activities tend to be more targeted and systematic. This identity-driven cognitive tendency enables teachers to go beyond the superficial focus on grammar rules or vocabulary size and explore the cognitive logic and cultural metaphors behind language, thus enhancing the depth and breadth of metacognitive activities.

The different levels of teacher identity further differentiate their paths of action on language metacognitive ability [5]. At the level of functional identity, teachers' pragmatic cognition of teaching responsibilities may prompt them to focus on the efficiency and accuracy of language knowledge imparting, thus giving priority to optimizing the instrumental value of teaching strategies in the process of metacognition, such as adjusting the rhythm and difficulty of language input through the effect of classroom interaction. At the level of emotional and value identity, teachers' deep resonance with their professional mission may inspire them to question the social significance of language education, such as reflecting on how language teaching promotes critical thinking or social equity. This kind of high-level identity urges teachers to integrate ethical dimensions and cultural sensitivity in metacognitive activities, not only focusing on "how to teach", but also thinking about "why to teach" to incorporate more diverse value parameters into cognitive regulation. This leap from instrumental rationality to value rationality marks the sublimation of language metacognitive ability from technical operation to practical carrier of educational philosophy.

In addition, the stability and dynamics of teacher identity restrict the evolution direction of language metacognitive ability. When teacher identity is in a stable state, their metacognitive activities tend to present a coherent thread of reflection and a consistent goal of optimization. On the contrary, when identity fluctuates due to the impact of external environment or the reconstruction of internal values, language metacognitive ability may experience a short period of confusion, and then realize the transition of ability hierarchy through the reorganization of cognitive framework. This synergistic adaptation of identity and metacognitive ability reveals the internal relationship between self-innovation and cognitive upgrading in the process of teachers' professional development.

3.2. Reaction Mechanism of Language Metacognitive Ability to Teacher Identity

As the core component of teachers' cognitive system, language metacognitive ability not only serves the technical needs of teaching practice, but also acts on the construction

and reconstruction of teacher identity by shaping their reflective depth and cognitive vision. The essence of this reaction mechanism lies in the fact that language metacognitive ability provides teachers with a cognitive tool to analyze their professional roles, examine the meaning of teaching and reconstruct the value coordinates, so that their identity is no longer passive acceptance of external conventions, but active construction based on rational reflection. When teachers can systematically deconstruct the cognitive logic in language teaching, assess the appropriateness of teaching strategies and foresee the long-term impact of educational behavior, this higher-order thinking ability will prompt them to break through the inertial framework of identity and re-anchor the relationship between self and profession in critical dialogue. The reaction of language metacognitive ability to teacher identity is firstly reflected in the renewal of identity connotation caused by the expansion of cognitive depth. This identity transformation is not accidental, but comes from the continuous questioning of the nature of teaching in metacognitive activities: the more deeply teachers reflect on the cognitive law of language symbols, the development path of students' thinking and the expectations of society for language ability, the more likely their identity will break through the limitations of instrumental roles and evolve to a more inclusive and creative dimension. In this process, language metacognitive ability forces teachers to reevaluate their functional orientation in the educational ecology by constantly outputting new cognitive perspectives, thus promoting the iterative upgrading of identity.

Language metacognitive ability strengthens teachers' professional autonomy and consolidates the emotional foundation and value core of their identity. When teachers can independently design cognitive strategies, diagnose teaching problems and formulate improvement programs, this sense of control over the teaching process will be transformed into a sense of professional efficacy, which will deepen their ownership and recognition of teachers' identity. Such professional achievements not only enhance their professional self-confidence, but also may stimulate strong resonance with the identity of cultural bridges. At this time, language metacognitive ability has gone beyond the scope of technical tools and become an important medium for teachers to confirm their professional value and realize their self-identity. This kind of identity reinforcement driven by ability enhancement. The dynamic development of language metacognitive ability determines that its reaction to identity is persistent and unbalanced. There are differences in teachers' cognitive focus on language teaching at different professional stages: novice teachers may pay more attention to the accuracy of language knowledge, and their metacognitive activities focus on the optimization of teaching details, while their identity tends to be functional and normative; Mature teachers, on the other hand, may turn to abstract and refine the cognitive laws of language, and their metacognitive activities involve the speculation of educational philosophy, and their identity also inclines to value and criticism. This shift of cognitive focus constantly reshapes teachers' understanding of professional identity, which makes identity always in a spiral evolution.

3.3. Dynamics and Complexity of Interactive Relationship

The interaction between teacher identity and language

metacognitive ability is not a static causal chain, but a dynamic process embedded in the network of educational practice. Its running track always fluctuates, bifurcates, and reconstructs with the development of teachers' professional life. The dynamic nature of this interaction is first reflected in the non-equilibrium evolution of time dimension: at different stages of teachers' career, there are significant differences in the stability of identity and the development focus of metacognitive ability. Novice teachers may limit their metacognitive activities to the normative debugging of the teaching process because of the ambiguity of their identity. Experiential teachers, on the other hand, gradually expand their metacognitive perspective to the level of educational ethics and cultural criticism in the deepening of their identity.

The complexity of the interaction comes from the nonlinear interweaving of multiple influencing factors. Teacher personal experience, educational belief and emotional experience constitute the psychological basis of interaction. The same teaching situation may trigger different interaction modes because of teachers' individual cognitive style differences. A teacher with strong critical consciousness may actively deconstruct traditional identity labels in metacognitive reflection. Teachers who tend to be conservative may resist the change pressure of cognitive framework by strengthening their existing identity. At the medium level, organizational factors such as school culture, teaching and research community and evaluation system may not only become the catalyst of interaction, but also the bottleneck of its development. For example, the teaching and research culture that emphasizes innovation and exploration can often promote the co-evolution of teacher identity and metacognitive ability, while the over-quantitative assessment mechanism may separate the two, making metacognitive ability degenerate into utilitarian technical performance.

4. Conclusion

This paper constructs the cognitive-identity. The double helix developmental model confirms that the nature of second language teachers' professional growth is the co-evolution of cognitive ability and professional identity. It is suggested that teacher education should create cross-cultural reflective practice situations and combine metacognitive training with identity narrative. Future research can be extended to the field of non-common language teaching to further verify the universality of the theoretical model.

References

- [1] Marantika, J. E. R.: Metacognitive ability and autonomous learning strategy in improving learning outcomes. *Journal of Education and Learning (EduLearn)*, Vol. 15 (2021) No. 1: 88-96.
- [2] Teng, M. F., Zhang, D.: Task-induced involvement load, vocabulary learning in a foreign language, and their association with metacognition. *Language Teaching Research*, Vol. 28 (2024) No. 2: 531-555.
- [3] Basaffar, F. M., Bukhari, S.: Saudi university learners' metacognitive abilities and writing performance. *Sch Int J Linguist Lit*, Vol. 6 (2023) No. 2: 120-129.
- [4] Shi, L., Cheng, E. C. K.: Developing metacognitive teaching in Chinese language through conducting lesson study in Shanghai. *International Journal for Lesson & Learning Studies*, Vol. 10 (2021) No. 1: 75-88.

- [5] Wallace, M. P.: Individual differences in second language listening: Examining the role of knowledge, metacognitive awareness, memory, and attention. *Language Learning*, Vol. 72 (2022) No. 1: 5-44.