

Innovative Teaching: Conceptualisation, Theoretical Foundations, Dimensions, and Empirical Evidence

Xinyue Zhang¹, Mei Kin Tai², Yee Ling Lee²

¹School of Education, Faculty of Social Sciences & Leisure Management, Taylor's University, 47500 Subang Jaya, Selangor Darul Ehsan, Malaysia, ²Education for All Impact Lab, Taylor's University, 47500 Subang Jaya, Selangor Darul Ehsan, Malaysia

Corresponding Author Email: 0373286@sd.taylors.edu.my

DOI Link: <http://dx.doi.org/10.6007/IJARPED/v15-i4/29133>

Published Online: 06 October 2026

Abstract

Innovative teaching is a crucial pathway for enhancing classroom teaching quality, cultivating students' innovative teaching capabilities, and promoting the high-quality development of education. Against the backdrop of Education 4.0 and 5.0, innovative teaching has increasingly become a focal point of educational research. However, existing studies have primarily focused on its practical application and influencing factors, while reviews and comprehensive analyses remain limited. This paper employs a conventional literature review method to summarise and analyse representative domestic and international studies on innovative teaching. It discusses conceptual connotations, theoretical foundations, key influencing factors, and current research status of innovative teaching, while summarising the major achievements and existing issues in the field. The review indicates that innovative teaching, as a multidimensional teaching practice, has become an important topic in educational research. Nevertheless, discrepancies remain regarding the development and evaluation of teachers' innovative teaching capabilities in basic education, its conceptualisation as a distinct teacher-specific competency and the insufficient integration of individual and situational factors in explaining innovative teaching.

Keywords: Innovative Teaching, Traditional Literature Review, Theoretical Foundations, Influencing Factors, Educational Innovation

Introduction

With the rapid development of digital technology and the continuous advancement of educational modernisation, cultivating talent is equipped with innovative teaching thinking, problem-solving skills, and the capacity for lifelong learning has become a key objective of educational reform across the globe (Kim & Park, 2020). Against this backdrop, teachers need not only to impart knowledge but also to continuously update their educational philosophies, improve their teaching methods, and actively explore teaching practices that meet the educational demands of the new era (Jena & Barad, 2024). As a key pathway for driving classroom transformation and enhancing educational quality, innovative teaching has become an important topic in educational research (Cachia et al., 2010).

The concept of innovative teaching stems from reforms in educational practice and emphasises the creative application of new educational philosophies, technologies, and methods to enhance classroom teaching quality and foster students' holistic development (Puranik, 2020). It advocates continuous improvement in teaching philosophies, curriculum content, instructional methods, classroom organisation, and learning assessment to address practical teaching issues, improve instructional effectiveness, and promote teachers' professional growth (Sumathi, 2022). With ongoing educational reform and advances in information technology, innovative teaching has expanded to include diverse practices such as digital instruction, collaborative learning, project-based learning, and inquiry-based learning (Eswaran, 2024).

In recent years, research on innovative teaching has expanded considerably, covering conceptual definitions, theoretical foundations, influencing factors, measurement dimensions, and implementation outcomes (Chandra et al., 2021). Existing studies indicate that innovative teaching enhances students' learning engagement, innovative teaching capabilities, and academic performance while also improving teachers' professional competence and educational quality (Gusrianto et al., 2025). However, scholars have yet to reach a consensus regarding its conceptual definition, dimensional structure, theoretical basis, and measurement approaches, limiting the comparison, integration, and theoretical development of existing research.

However, these developments have also revealed a fragmented research landscape. Although existing studies have examined the concept, theoretical foundations, dimensions, influencing factors, and outcomes of innovative teaching, these perspectives are often discussed separately. As a result, it remains difficult to obtain a coherent understanding of innovative teaching as a teacher practice and to identify how the different strands of research are connected.

The novelty of this review lies in bringing these conceptual, theoretical, dimensional, and empirical perspectives together within a single analysis of innovative teaching. Rather than focusing only on specific teaching methods or their outcomes, the review examines innovative teaching as a multidimensional teacher practice and synthesises how it has been conceptualised and investigated across different educational contexts. This contributes to the social sciences by clarifying the conceptual and theoretical development of innovative teaching, identifying areas of consistency and inconsistency in the existing literature, and highlighting underexplored issues that can guide future empirical research, particularly in basic education.

Given this context, this paper employs a conventional literature review approach to synthesise and analyse domestic and international research on innovative teaching. It focuses on the conceptual definition, theoretical foundations, dimensional structure, and empirical research progress of innovative teaching, aiming to clarify the field's development, identify key viewpoints and limitations in existing studies, and provide a reference for future research and educational practice.

Definition of Innovative Teaching

Scholars have proposed more diverse definitions of innovative teaching. Khatoon (2023) believes that innovative teaching is the process by which teachers optimise the learning environment through innovative teaching classroom teaching strategies; Numonjonov (2020) regards it as an overall process of innovating all elements and steps of teaching; and Shermukhammadov (2022) emphasises that its core lies in enhancing the individual's innovative teaching potential through educational means. Dai et al. (2023) pointed out that innovative teaching is a process in which individual teachers independently generate innovative teaching ideas based on teaching objectives in the teaching context, implement these ideas in practice, and continuously reflect on and refine their teaching practices.

Importantly, innovative teaching is not only the behaviour of teachers to creatively improve teaching and enhance classroom effectiveness, but also an important way to promote the development of students' innovative teaching awareness, innovative teaching thinking and innovative teaching ability (Eli, 2021). Teachers' creative teaching can often stimulate students' interest in learning and thinking potential, and the improvement of students' innovative teaching qualities in turn drives teachers to continuously carry out innovative teaching (Shermukhammadov, 2022). Therefore, innovative teaching has become a key force in improving teaching quality and promoting teachers' professional development (Foschi, 2021).

According to Tan et al. (2022), innovative teaching consists of three dimensions, which are *Innovative Teaching Ideation*, *Innovative Teaching Action*, and *Innovative Teaching Outcome*. *Innovative Teaching Ideation* refers to the process of generating and developing innovative teaching methods, aiming to provide new and creative ideas and strategies for teaching design and implementation (Tan et al., 2022). This process includes rethinking traditional teaching and designing more interactive, participatory and personalised teaching methods, adjusting teaching methods according to students' needs and situations, improving teaching process, and finding teaching information from different resources. Ultimately, it improves the learning experience and enhances teaching effectiveness.

Innovative Teaching Action refers to the use or application of new technologies, interactive learning, personalised assessment and other means to enable teachers to enhance students' learning experience which emphasise practicality and applicability, encourage students to actively participate, think deeply and apply knowledge they have learned to solve problems (Tan et al., 2022). In terms of assessment, they need to break through the traditional examination evaluation model, adopt a diversified evaluation method, and focus on students' learning process and results.

On the other hand, *Innovative Teaching Outcome* refers to the results brought about by innovative teaching methods. These results are reflected in the improvement of students' innovative teaching ability and academic level (Tan et al., 2022). It includes teachers encouraging students to discuss controversial issues, actively express ideas that are different from others, and propose new solutions to problems during the teaching process. At the same time, students' innovative teaching thinking and creativity are stimulated and developed through participation and discussion, interdisciplinary projects, etc., enabling students to achieve innovative teaching results (Revenko et al., 2024).

Theoretical Foundation of Innovative Teaching

Self-Determination Theory was proposed by Deci and Ryan in the 1980s to explain the psychological mechanisms underlying individuals' motivation, engagement, and behavioural performance. They believed that individual behavioural motivation comes from the satisfaction of three basic psychological needs: autonomy, competence, and relatedness. Autonomy is an individual's control and choice over their own behaviour; a sense of competence is an individual's experience of efficacy in coping with challenges and achieving success; and relevance emphasises the emotional connection in interpersonal relationships (Deci et al., 2017). When these psychological needs are supported, individuals will show higher levels of autonomous motivation and continuous learning investment (Deci & Ryan, 1985; 2000; 2020).

Existing research suggests that these three psychological needs are not independent of one another but rather function together during the learning process (Guay, 2022). When learners possess sufficient autonomy, feel competent in handling learning tasks, and perceive support from teachers and peers, they are more likely to develop stable and enduring learning motivation (Boekaerts, 2010). The theory further points out that extrinsic motivation is not completely negative but can be gradually transformed into intrinsic motivation through the process of internalisation and integration, so that individuals can internalise external requirements into personal values and goals (Martela, 2020). However, many educational practises still tend to adopt controlling strategies, which not only weakens learners' autonomy but also limits the realisation of their potential (Ryan & Deci, 2020).

Self-Determination Theory (Deci & Ryan, 1985) provides a useful perspective for understanding why teachers engage in innovative teaching. The theory proposes that individuals are more likely to develop higher-quality motivation when their needs for autonomy, competence, and relatedness are supported (Deci et al., 2017). Among these needs, autonomy is particularly relevant to teachers' engagement in innovative teaching because innovative teaching requires teachers to make professional decisions and explore alternatives to established teaching practices. In the context of innovative teaching, teachers are expected to think independently about educational approaches and reflect on their teaching practices in relation to teaching objectives and classroom needs (Bakkenes et al., 2010). When teachers have sufficient decision-making power and creative space, they can design and implement teaching based on their own professional judgement, educational beliefs, and values. Such opportunities can strengthen teachers' sense of autonomy and give them greater control over their professional practices, which may increase their willingness to explore and adopt new teaching approaches (Deci et al., 2017). The use of digital technology can further support this process by providing teachers with access to different platforms, collaborative tools, and learning resources, allowing them to experiment with alternative ways of designing and delivering instruction. In this sense, teacher autonomy provides an important motivational foundation for moving beyond established teaching routines and engaging in innovative teaching.

Teachers' sense of competence is also important for sustaining innovative teaching because the adoption of new teaching approaches requires teachers to possess sufficient knowledge, skills, and confidence to implement them (Ertmer & Ottenbreit-Leftwich, 2010). Innovative teaching involves the use of new strategies and methods, which may require teachers to

develop their teaching expertise and adapt their practices to new classroom demands (Ahmad et al., 2025). Professional learning, constructive feedback, and opportunities to engage with new teaching approaches can help teachers develop the knowledge and skills needed to implement innovative teaching practices. In addition, successful experiences with experimental teaching, project-based learning, or interdisciplinary activities can strengthen teachers' perceptions of their own teaching competence (Deci et al., 2017). When teachers feel capable of dealing with new teaching demands and successfully applying innovative teaching approaches, this sense of competence can become an important source of motivation for further exploration and improvement. Therefore, strengthening teachers' professional competence can support their willingness and ability to sustain innovative teaching.

In addition to autonomy and competence, teachers' sense of relatedness can influence their engagement in innovative teaching. Relatedness concerns teachers' emotional connection and sense of belonging within their professional environment (Averill & Major, 2020). Innovative teaching is not an isolated individual activity, as teachers may need to communicate with colleagues, interact with students, and receive support from school leaders and the wider school community (Hayak et al., 2025). Encouragement from colleagues, recognition from students, and organisational support can provide teachers with positive social experiences and strengthen their sense of professional belonging. Such relationships can also create opportunities for teachers to exchange experiences, share teaching ideas, and receive feedback during the process of developing new teaching practices. When teachers feel connected to and supported by others in their professional environment, they may be more willing to continue experimenting with innovative approaches and sustain their innovative teaching practices (Deci et al., 2017).

Definitions of Innovative Teaching

Tan et al. (2022) conceptualised innovative teaching as a multidimensional construct consisting of three dimensions: *Innovative Teaching Ideation*, *Innovative Teaching Action*, and *Innovative Teaching Outcome*. An examination of these three dimensions revealed a high degree of consistency with the core elements of Self-Determination Theory (Deci et al., 2017). This consistency is demonstrated by the clear and detailed correspondence between each dimension of the Innovative Teaching Scale (Tan et al., 2022) and the core principles of Self-Determination Theory (Deci et al., 2017). Firstly, the dimension of *Innovative Teaching Ideation* (Tan et al., 2022) emphasises teachers' independent thinking and judgment regarding educational philosophies, and their reflection and reconstruction based on student needs and teaching objectives. When teachers are given sufficient decision-making power and creative space and can design and implement teaching based on their own educational beliefs and values, their need for autonomy will be fully satisfied. This satisfaction will further transform into a strong sense of internal control and professional achievement, thereby continuously enhancing their willingness to innovate (Alblooshi et al., 2021).

Secondly, the *Innovative Teaching Action* dimension (Tan et al., 2022) refers to teachers' adoption of new and innovative teaching strategies and methods in the classroom to improve teaching quality. This process is closely related to the "competency" requirement in Self-Determination Theory (Deci et al., 2017). When teachers successfully improve teaching outcomes through experimental teaching, project-based learning, or interdisciplinary

activities, their professional competence is strengthened. This positive experience of teaching competence is further internalised as an intrinsic motivation for teachers to continuously explore, improve, and innovative teaching strategies (Averill & Major, 2020).

Thirdly, the dimension of *Innovative Teaching Outcomes* (Tan et al., 2022) is not only reflected in improved teaching effectiveness, but more importantly in the positive interactions between teachers and students, among teachers, and within the school community. This social support and feedback echo the need for "belonging" in Self-Determination Theory (Deci et al., 2017). When teachers receive encouragement from colleagues, recognition from students, and support from school organisations during innovative teaching, their emotional connection and sense of professional belonging are enhanced. This positive social atmosphere further motivates teachers to pursue innovative teaching practises as a continuous professional endeavor.

The three dimensions listed above constitute a comprehensive innovative teaching framework, revealing the path of how learning motivation is formed and transformed. Innovative teaching, as a professional practise with the core objective of cultivating students' innovative teaching literacy, is intrinsically driven by fundamental human psychological needs revealed by Self-Determination Theory (Deci et al., 2017). Specifically, successful innovative teaching mechanisms rely on satisfying teachers' psychological needs in terms of autonomy, competence, and relatedness. Therefore, based on the essence of Self-Determination Theory (Deci et al., 2017), innovative teaching by teachers is an empowering and mutually reinforcing process driven by intrinsic motivation (Qin et al., 2025). It is not only a key path to improving educational quality and transforming teaching models, but also a sustainable way to activate the intrinsic vitality of the educational ecosystem.

Empirical Studies on Innovative Teaching

This section systematically reviews recent research on innovative teaching, focusing on its impact on: (i) individual teachers' attitudes and behaviours; (ii) its role in organisational development, (iii) its cross-cultural applicability. Based on this, this section further summarises the theoretical contributions and limitations of existing research and explores potential future research directions.

Innovative teaching is a dynamic process in which teachers and students creatively solve practical problems in teaching practise. Puranik (2020) believes that effective innovation requires the unity of goals, processes and methods to ensure two-way interaction between teaching innovation and learning innovation. Isabirye et al. (2025) pointed out that innovation promotes the sustainable development of education through systematic transformation of teaching links, and its core is to build an educational ecology that cultivates creativity.

Teachers' attitudes, motivations and emotional states play a key role in innovative teaching behaviour. Pozo-Rico (2023) believed that positive emotions can expand thinking and action capabilities and promote creative behaviour; Daniel et al. (2024) found that internal motivation promotes the generation and implementation of innovative teaching ideas, while external motivation enhances the effectiveness of innovation implementation through social support. Haidamaka et al. (2022) believes that subject knowledge and teaching expertise

provide cognitive conditions for innovation, enabling teachers to transform professional qualities into classroom practical abilities.

Zainal (2020) proposed that teaching innovation ability is composed of learning ability, educational ability, social ability and modern educational technology ability and empirically verified the rationality of its structure. Caliskan and Zhu (2020) emphasised that innovation requires an open attitude and respect for students' differences. Skrbinjek et al. (2024) pointed out that innovation requires teachers to have a unity of scientific research awareness, theoretical cultivation and knowledge and skills.

In short, existing research suggests that effective innovative teaching is a dynamic ecosystem. Its core driving force stems from teachers' intrinsic motivation and positive emotions, which provides the necessary psychological foundation for innovative teaching behaviour. All innovative teaching efforts aim at the ecological transformation of the teaching system, with the goal of building an educational environment that can continuously cultivate students' creativity through the unity of objectives, processes and methods.

Innovative teaching not only promotes individual teacher growth and teaching improvement but also drives learning and change at the school level through teamwork and knowledge sharing, thus playing a positive role in organisational development. Gaspary et al. (2020) pointed out that rigid organisational structures inhibit innovation, while open management systems can promote creativity (Lam et al., 2021). Through innovative teaching practises, teachers not only improve teaching at the classroom level, but also prompt schools to continuously optimise their management concepts, resource allocation and collaboration mechanisms, thereby promoting organisational learning and renewal (Ferreira et al., 2021).

Shermukhammadov (2022) points out that teachers actively participate in school innovation projects and collaborative activities at the organisational level. By sharing experiences, exchanging ideas and improving teaching strategies, the innovative teaching culture advocated by the school gradually permeates teaching practise, thereby realising the transformation of organisational innovation into classroom innovation and promoting the continuous improvement of the school's overall development (Shermukhammadov, 2022).

Cai (2021) points out that schools meet teachers' competency and relationship needs by providing resource support, creating a collaborative atmosphere and establishing open communication mechanisms. This not only enhances teachers' confidence in innovation and sense of belonging, but also integrates innovation activities into the school's operating system, thereby promoting organisational learning and sustainable development (Cai, 2021). Donges et al. (2023) believes that institutional innovation provides conditions and guarantees, Jiao et al. (2022) found that excessive pressure will weaken innovation investment and Chen et al. (2023) pointed out that job crafting can promote innovation by enhancing sense of efficacy and emotional intelligence.

Innovative teaching not only enhances teachers' professional competence but also promotes overall progress in school management, resources and culture (Nikola, 2021). Research shows that open and supportive organisational environments effectively stimulate teachers' creativity, while overly rigid systems stifle innovation (Balkar, 2024). Teachers can transform

individual teaching innovations into a driving force for sustainable school-wide development through teamwork and experience sharing (Oppi et al., 2023). Therefore, schools should focus on building systems and cultures that encourage innovation, while also paying attention to teachers' psychological and work well-being, providing them with necessary resources and emotional support to achieve genuine organisational learning and sustainable development (Fuad et al., 2022).

Additionally, research also reveals that innovative teaching has shown applicability and scalability in both international and local educational environments (Howard et al., 2021). In other words, innovative teaching methods can be effectively applied in a wide range of international and local educational contexts, and they can be scaled from small pilot programmes to broader implementation while maintaining positive outcomes. Therefore, even when education systems and classroom cultures differ, innovative teaching can still be applied across different contexts because its core practices can be maintained while specific teaching strategies are adjusted according to local conditions (Loucks-Horsley et al., 2010).

In fact, innovative teaching often involves a relatively clear framework, including task design, learning steps, and evaluation methods, while allowing teachers to modify specific practices according to their classroom situations (Langsford, 2021). Teachers can also reconstruct their teaching strategies based on professional judgement in response to different cultural and technological conditions (Blömeke et al., 2021). In this way, the core principles of innovative teaching remain relatively stable, while their implementation can be adapted to differences in student composition, classroom size, available resources, and educational context. This flexibility helps explain why innovative teaching can be transferred across different educational and cultural settings (Tong, 2020; Deed, 2020).

At the same time, many innovative teaching practises rely on a clear operational framework, such as task design, learning steps and evaluation methods, which enable teachers to adjust specific operations according to their own situations without changing the core logic (Langsford, 2021). It is precisely this characteristic of "stable structure and adjustable form" that enables innovative teaching to expand from individual teachers to grade groups or school levels and to continue to produce results under different resource levels, student compositions or classroom sizes (Langsford, 2021). Therefore, the core mechanisms of innovative teaching have high transferability and contextual flexibility, enabling them to continue to play a role in a wider range of educational environments (Deed, 2020).

Akram et al. (2021) pointed out that innovative teaching relies on the integration of knowledge, skills and attitudes, emphasised the value of openness and collaboration. Their research further shows that these characteristics are not only the foundation for teaching improvement but also enable teachers to adjust their teaching strategies to meet the teaching needs in a multicultural context across different cultural norms, educational traditions and classroom interaction methods (Akram et al., 2021). This indicates that innovative teaching is not significantly limited by cultural background or institutional differences and its core concepts can be understood and applied in a multicultural context, thus demonstrating strong cross-cultural applicability (Skrbinjek et al., 2024).

Indeed, the cultural environment shapes teachers' understanding of innovation and the boundaries of their acceptable behaviour in teaching (Nguyen et al., 2021). Teacher innovation is a teaching adaptation process driven by both cultural norms and technological conditions, teachers continuously reconstruct strategies based on professional judgment in specific situations (Blömeke et al., 2021). Therefore, innovative teaching can be adopted and adjusted in diverse environments and its core mechanism has cross-cultural applicability and strong contextual extensibility (Blömeke et al., 2021).

Research Gaps in Innovative Teaching

In general, international academics generally agree that innovative teaching is not simply the application of new methods or technologies, but rather a learning-centered, creativity-driven educational practice (Qu & Liu, 2025). It not only promotes teachers' professional development but also improves student learning outcomes and enhances overall school performance (Setiawan et al., 2021). However, current research still has several limitations. Firstly, most studies focus on higher education and vocational education, with insufficient attention paid to the development and evaluation of teachers' innovative teaching capabilities in basic education (Nikola, 2021). This represents a contextual and developmental gap, as teachers in basic education operate within distinctive pedagogical, curricular, and student-related contexts that may require different forms of innovative teaching capability.

Secondly, some Chinese academia often confuses general innovation ability with innovative teaching ability, ignoring the particularity of the teaching profession and the complexity of teaching situations (Huang et al., 2024). Consequently, limited attention has been given to conceptualising and empirically examining innovative teaching ability as a distinct teacher-specific competency that involves adapting and applying novel pedagogical approaches to address diverse students' learning needs and contextual demands.

Thirdly, the limited number of empirical studies and the insufficient integration of individual and situational factors restrict a comprehensive understanding of the mechanisms underlying innovative teaching (Stumbrienė et al., 2024). Individual factors include teachers' motivation, emotions, professional knowledge, and teaching expertise, while situational factors involve organisational structures, resource support, collaboration, and institutional support (Pozo-Rico, 2023; Haidamaka et al., 2022; Cai, 2021; Balkar, 2015). However, these factors are often examined separately, making it difficult to understand how teachers' personal characteristics interact with their working environment to influence innovative teaching. More research is therefore needed to consider these factors together.

Based on the discussion above, greater attention should be given to primary school teachers, as existing research has paid more attention to higher and vocational education, leaving the development and evaluation of innovative teaching among basic education teachers less explored (Nikola, 2021). Only when teachers establish correct and forward-looking teaching awareness can they provide solid and effective theoretical guidance for educational practice. Future research should also further develop the theoretical understanding of innovative teaching and promote its localisation. This is important because teachers' understanding and practice of innovation can be shaped by cultural and technological conditions, and teaching strategies may need to be adjusted according to specific educational contexts (Nguyen et al., 2021; Blömeke et al., 2021).—In addition, existing research has not sufficiently integrated

individual factors, such as teachers' motivation and professional knowledge, with situational factors, such as organisational structures, resources, and institutional support. Future studies could therefore develop a more integrated model to explain how these factors jointly influence innovative teaching.

Conclusion

As a key pathway for driving classroom teaching reform, enhancing educational quality, and cultivating students' innovative teaching capabilities, innovative teaching has become a significant topic in educational research in recent years. Existing literature suggests that innovative teaching involves not only innovation in teaching philosophies, methods, and assessment, but also teachers' proactive exploration and professional growth in practice. Studies have shown that innovative teaching enhances students' learning engagement, innovative teaching capabilities, and academic performance while also contributing to teachers' professional competence, organisational learning within schools, and educational innovation. On the other hand, innovative teaching has shown applicability and scalability across both international and local educational environments. This flexibility allows innovative teaching to be adapted to differences in resources, student composition, classroom size, and educational settings. These characteristics suggest that innovative teaching can maintain its core principles while being adapted to the needs of different educational environments. In summary, innovative teaching involves teachers' active development, implementation, and refinement of teaching practices to improve teaching and learning. Its positive contributions to students' learning and teachers' professional growth, together with its flexibility across different educational contexts, highlight its importance in promoting educational innovation and quality.

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