



The Nexus Of Teacher's Self-Directed Learning And Reflective Practices For Continuous Professional Development: A Conceptual Paper

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Citation: Jen Renita binti Mappah (2024), The Nexus Of Teacher's Self-Directed Learning And Reflective Practices For Continuous Professional Development: A Conceptual Paper, *Educational Administration: Theory and Practice*, 30(5), 11837-11854, Doi: 10.53555/kuey.v30i5.5038

ARTICLE INFO

ABSTRACT

Self-directed learning among teachers is closely connected to their reflective teaching practices. Reflective teaching practice involves teachers engaging in a systematic reviewing process to make links from one experience to the next, making sure their students make maximum progress. It is a basic part of teaching and learning that aims to make teachers more aware of their professional knowledge and actions by challenging assumptions of everyday practice. Reflective practice helps teachers understand how their students best learn and allows them to be accountable for their teaching. By assessing the strengths and weaknesses in their teaching, teachers will develop an awareness of the factors that control and prevent learning. Self-directed learning, on the other hand, involves educators taking the initiative to diagnose their learning needs, set learning goals, identify resources, choose and implement appropriate learning strategies, and evaluate learning outcomes. It is a process that requires teachers to take responsibility for their learning, manage their educational demands, and pursue opportunities to meet their learning needs. By engaging in self-directed learning, teachers can improve their teaching quality, stay updated with the growing body of knowledge in their field, and enhance their professional performance. Therefore, self-directed learning and reflective teaching practices are interrelated and complementary, as they involve teachers taking responsibility for their own learning and professional development while handling the nature of work in facing the rapidly changing and uncertain nature of the world, which requires them to adapt and respond to new challenges of volatility, uncertainty, complexity, and ambiguity (VUCA).

Keywords: Self-Directed Learning, Reflective Practices, Teacher's Continuous Professional Development, Teacher Career Stages, Teacher Life Cycle

1 INTRODUCTION

1.1 Background of Study

The concept of VUCA (volatility, uncertainty, complexity, and ambiguity) in the education world is related to teacher's self-directed learning and reflective practices in several ways (Coopersmith, K., 2022). VUCA represents the rapidly changing and uncertain nature of the world, which requires individuals to adapt and respond to new challenges. In this context, self-directed learning becomes a crucial strategy for teachers to learn and grow professionally. Self-directed learning allows teachers to take control of their learning and development, rather than relying solely on traditional classroom instruction. This approach is particularly useful in the VUCA era, as it enables teachers to proactively seek out information, resources, and experiences that will help them stay current and effective in their roles (Dhillon, R., & Nguyen, Q. C., 2021).

Reflective practices also play a significant role in the VUCA context. By reflecting on their experiences and engaging in critical self-evaluation, teachers can identify areas for improvement and develop strategies for addressing the challenges they face. This process of continuous reflection and learning helps teachers to become more adaptable and resilient in the face of volatility, uncertainty, complexity, and ambiguity. In summary, the concept of VUCA in the education world highlights the importance of self-directed learning and

reflective practices for teachers. These strategies enable teachers to navigate the complex and uncertain environment of the VUCA era and to develop the skills and competencies needed to support their students in a rapidly changing world (Dhillon, R., & Nguyen, Q. C., 2021).

Change is rapid and unpredictable, continuous professional development becomes essential for teachers to adapt and thrive. The concept of VUCA underscores the importance of continuous professional development for teachers to enhance their leadership skills, embrace new teaching approaches, and adapt to the changing educational landscape effectively. By investing in ongoing learning and growth, teachers can better navigate the challenges posed by volatility, uncertainty, complexity, and ambiguity in today's world (Dhillon, R., & Nguyen, Q. C., 2021). Educators resist change for various reasons. Research indicates that beliefs and attitudes, professional identity, and top-down change in which teachers have little input are three factors that drive teachers' decisions to resist or accept change in local school reform efforts. School administrators must be equipped to support teachers' emotional reactions to new initiatives. If not, then increasing student achievement is minimized, and professional capital is jeopardized (Powers, M. G., 2021).

Competency is the basis for the combination of teachers' skills, knowledge, and behaviours that must strive to enhance their ability in the education world. Each component should be integrated holistically to support the teachers' effectiveness, administration, and school excellence. Education is not an easy concept because it requires careful planning. Not only does the education system operate as an agent of knowledge, but it also plays a more significant role in developing a nation that can compete internationally. To improve the quality of education in Malaysia, the Ministry of Education Malaysia (MOE) has taken one step further by introducing the Malaysia Education Blueprint 2013-2025. This situation is a need to strengthen and make improvements to the previous education system plan, which is the Education Development Plan 2001-2010. Nevertheless, MOE's priority is to increase teachers' efficiency, competency, and integrity in the areas of education management and administration (MOE, 2001, 2013).

Teachers are the most important individuals in the successful implementation of the national curriculum and they are a key element in improving the quality and excellence of education. In this case, quality teachers can change the situation from backward to upward in a student's performance in learning. Attitudes such as credibility, commitment, and earnest effort for the development of learners are among the factors that enhance teachers' quality of their professional work, which is related to their self-directed learning and reflective practices (Ismail, S. N., Muhammad, S., Omar, M. N., & Raman, A., 2020).

1.2 Self-Directed Learning

Self-directed learning among teachers refers to the process in which educators take the initiative to diagnose their learning needs, set learning goals, identify resources, choose and implement appropriate learning strategies, and evaluate learning outcomes. It is a concept derived from adult learning theories essential for continuous professional development. Teachers engage in self-directed learning to improve their teaching quality, stay updated with the growing body of knowledge in their field, and enhance their professional performance. This process involves educators taking responsibility for their learning, managing their educational demands, and pursuing opportunities to meet their learning needs. Self-directed learning is a vital component of teachers' professional development and is associated with improved teaching experience and quality. It requires educators to be self-motivated, take initiative, and demonstrate strong willingness and motivation to learn and grow professionally. (Ahhammad, F., 2023; Bakshi, M. A., 2019; Bhatt, S. P., 2021).

The development of information and communication technologies and the increase in virtual learning opportunities have led to a change in people's understanding of learning. In traditional understanding, 'teacher' was seen as the only source of knowledge. Today, sources of information have become very diverse. Therefore, as information has become easier to access, the nature of learning has also changed. In the past, it was important to memorize information, but nowadays, it has become important to gain skills related to where information can be accessed and how to learn it (Karatas & Basbay, 2014; Karatas, K., Senturk, C., & Teke, A., 2021).

To be more precise, people are expected to acquire the skills of learning to learn. Individuals who cannot learn to learn and who cannot organize their learning processes fall behind in many areas in the globalizing world where technology is rapidly developing (Lan, Y., 2022; Limbu, M. K., 2020; Taskin, 2019). At this point, we come across the concept of 'self-directed learning' regarding the need for people to manage their learning processes. Self-directed learners make plans by determining their learning goals. They organize how to access learning resources. They are also open to learning, curiosity, autonomy, and taking the initiative to learn in a self-controlled manner (Dhungana, S., 2022; du Toit-Brits & van Zyl, 2017).

1.3 Reflective Practices

Self-directed learning among teachers is closely connected to their reflective teaching practices. Reflective teaching practice involves teachers engaging in a systematic reviewing process to make links from one

experience to the next, making sure their students make maximum progress. It is a basic part of teaching and learning that aims to make teachers more aware of their professional knowledge and actions by challenging assumptions of everyday practice (Akram, T., & Mehmood, S., 2023; Amalia, L. L., Widiati, U., Basthomi, Y., & Cahyono, B. Y., 2020). Reflective practice helps teachers understand how their students best learn and allows them to be accountable for their teaching. By assessing the strengths and weaknesses in their teaching, teachers will develop an awareness of the factors that control and prevent learning. Self-directed learning, on the other hand, involves educators taking the initiative to diagnose their learning needs, set learning goals, identify resources, choose and implement appropriate learning strategies, and evaluate learning outcomes (Aryal, R., 2022).

It is a process that requires teachers to take responsibility for their learning, manage their educational demands, and pursue opportunities to meet their learning needs. By engaging in self-directed learning, teachers can improve their teaching quality, stay updated with the growing body of knowledge in their field, and enhance their professional performance. Therefore, self-directed learning and reflective teaching practices are interrelated and complementary, as they involve teachers taking responsibility for their own learning and professional development (Choy, S. C., Yim, J. S. C., & Sedhu, D. S., 2019; De Lima, K., 2014).

1.4 Continuous Professional Development

Effective professional development is crucial for teachers to enhance their knowledge and skills, collisional development may lead to improved student outcomes. Teachers need to engage in self-directed learning and reflective teaching practices as part of their continuous professional development (Jita, L. C., & Mokhele, M. L., 2014). This includes regularly assessing and evaluating their teaching methods and strategies, identifying areas for growth and improvement, and seeking out relevant learning opportunities to further develop their teaching abilities. By incorporating self-directed learning and reflection into their professional development, teachers can adapt their teaching practices to better meet the needs of their students. By doing so, they can create a supportive and instructional-focused learning environment that enhances student outcomes. This causes teachers to perceive their learning experiences as more valuable, which makes them more likely to change their teaching practice to positively affect student outcomes. Furthermore, effective professional development should be supportive, job-embedded, collaborative, and ongoing. Teachers should have access to resources and support, such as mentorship programs and collaborative learning communities, to enhance their professional growth. Through these collaborative opportunities, teachers can engage in peer-to-peer learning, share best practices, and receive feedback and support from their colleagues (Jita, L. C., & Mokhele, 2014). By understanding the importance of a teacher's self-directed learning and reflective practices that are related to continuous professional development, it is also vital to make the connection with the teacher's life cycle or career stages based on the teacher's experiences in teaching and background knowledge, skills, and attitudes (Lan, Y., 2022; Zhang, X., Admiraal, W., & Saab, N., 2021). Nowadays, educators have a high level of education that always enhances competencies, and accumulates new skills by getting engaged in lifelong learning. They are constantly engaged in their PD alongside their career. Simultaneously, enhancing expectancies from educator trainers by governmental institutes obligates the community to work hard, which intensifies the difficulties in different ways such as method, material, competencies, and manner (Thakur, 2012). To address these demanding situations, educators ought to possess a sense of motivation for continua and career-long learning, which expedites sustained, mental, and career-cantered adulthood (Derakhshan, 2022). For the profession to keep up with changes, educators renew and revise their competencies, information, viewpoints, and conduct. They are engaged in multiple learning tasks like self-directed learning, cooperative learning, thoughtful activities, and digital learning, which assist them in achieving professional development (PD) (Bhatt S. P., 2021). A critical element for a prosperous search for work alludes to PD, which is described as tasks designed to assist learners to get ready for succeeding in the university-work transition (Blau et al., 2014). Learning opportunity educators participate to enhance their knowledge and to continue to be at the cutting edge of effective education tactics and strategies, and this approach is also part of PD (Alibakshi and Dehvari, 2015). Educator PD is beyond the sequence of education workshops, institutions, conferences, and daily in-service. It is a learning procedure of how to make knowledge practical by engaging in practice inside a practitioner's network (Schlager and Fusco, 2003). Educator PD across an individual's profession has an aspect of self-directed PD in terms of the educator taking the initiative and possessing the determination to learn (Zepeda, 2013; Zulaiha, S., Mulyono, H., & Ambarsari, L., 2020).

1.5 Teacher Life Cycle and Teacher Career Stages

Understanding the life cycle or career stages of teachers is essential for recognizing the different phases of their professional journey. *Novice or Early Stage* is an initial phase that marks the beginning of a teacher's career, characterized by discussions, debates, and experimentation as novice teachers familiarize themselves with the profession (Cawte, 2020). It is a period where teachers are learning the ropes, gaining experience, and establishing their teaching style. *Mid-career* is a stage that represents a phase where teachers have gained substantial experience and expertise in their roles (Hiew, W., & Murray, J., 2021). Teachers in this stage may focus on refining their teaching practices, taking on leadership roles, and mentoring newer educators. *Late Career* is when teachers progress into the late career stage, they have accumulated extensive experience and

knowledge in the field (Keller-Schneider, M., Zhong, H. F., & Yeung, A. S., 2020). This phase may involve reflecting on one's legacy, considering retirement plans, and imparting wisdom to younger colleagues (Cawte, K., 2020).

There are stages of a teaching career that can be broken down into six stages: pride, survival, experimentation, disillusionment, rebellion, and ongoing mastery. These stages reflect the emotional and professional journey that teachers go through during their careers. Based on Huberman's Model an open model of a teacher's career life cycle consists of four phases: novice, advanced beginner, competent teacher, and expert teacher (Keller-Schneider, M., Zhong, H. F., & Yeung, A. S., 2020). This model highlights the progression from entry-level teaching to mastery and expertise over time. The career Continuum Model which is a life-cycle model for career teachers promotes a vision of excellence across a lifetime career by addressing teacher needs at different phases along the continuum of practice (Kwee, C., 2020). This model emphasizes continuous growth and development throughout a teacher's professional life. Understanding these various stages in a teacher's career can help educators navigate their professional development effectively, adapt to changing circumstances, and make informed decisions about their growth and impact in the field of education (Tantawy, N., 2020; Keller-Schneider, M., Zhong, H. F., & Yeung, A. S., 2020).

Understanding how to best situate an approach to professional development activities required understanding both our staff's reluctance to take on new approaches to their practice and their reluctance to engage with new technologies. Our initial approach was to use Huberman's framework of teacher career development; however, it was also important to understand the basic beliefs that may be driving teacher change, or reluctance to change, concerning their practice and the uptake of new technologies. These understandings are important in framing the provision of future professional development opportunities for staff that support the innovative teaching culture the institution has sought to create (Banks, J. 2016; Remigoso, E. H., & Base, R. L., 2021; Raduan, N. A., & Na, S. I., 2020).

2 THEORETICAL OVERVIEW AND LITERATURE SYNTHESIS

2.1 Purpose and statement of problem

Studying teachers' self-directed learning and reflective practices for continuous professional development serves several crucial purposes based on the provided search results: *Integration of Knowledge and Experience*: self-directed learning and reflection are central processes for integrating knowledge and experience professional development (Alemayehu, E., 2021). By engaging in these practices, teachers can synthesize new information with their existing experiences, enhancing their teaching effectiveness. *Enhancing Professional Growth*: self-directed professional development programs empower teachers to take control of their learning journey, leading to enhanced outcomes and unique experiences (Antonio, D., 2020). Through self-directed learning, educators can tailor their development to meet their specific needs and interests, fostering continuous growth. *Building Confidence and Understanding*: reflective practice helps create confident teachers by developing their ability to understand how students learn and the best ways to teach (Araújo, T. S., Lima, F. D. C., Oliveira, A. C. L. D., & Miranda, G. J., 2015). This process not only enhances teaching strategies but also boosts educators' confidence in their instructional approaches.

Motivation and Self-Concept: engaging in self-directed professional development improves educators' self-concept and motivation, enabling them to handle professional experiences effectively (Banegas, D. L., 2020). Teachers who are motivated by self-directed learning are more likely to tackle challenges with resilience and enthusiasm. *Deliberate Improvement in Knowledge and Skills*: professional development is described as a deliberate process of improvement in knowledge and skills for teachers, especially those working with students with moderate to severe disabilities (Bentall, C., 2020). Self-directed learning plays a vital role in this improvement process, allowing teachers to address specific needs related to their students' requirements.

In conclusion, studying teacher's self-directed learning and reflective practices for continuous professional development is essential for integrating knowledge and experience, enhancing growth, building confidence, boosting motivation, and deliberately improving knowledge and skills. By embracing these practices, educators can adapt to changing educational landscapes, refine their teaching approaches, and make meaningful contributions to student learning outcomes (Borg, S., Lightfoot, A., & Gholkar, R., 2020; Bragg, L. A., Walsh, C., & Heyeres, M., 2021).

This study investigates the interplay between self-directed learning and reflective practices in the context of teacher continuous professional development (CPD). By examining the experiences of educators engaged in self-directed learning (SDL) and reflective practices (RP), it aims to uncover the mechanisms that foster professional growth and the development of pedagogical expertise. The study employs a case study approach under a generic qualitative research method, incorporating surveys, document analysis, interviews, and classroom observations to explore the following research questions:

1. How do teachers engage in self-directed learning and reflective practices for their professional development?
2. What are the factors that facilitate or hinder self-directed learning and reflective practices in teacher CPD?
3. How do self-directed learning and reflective practices impact teacher professional growth and student outcomes?
4. What is the basic mechanism or intervention on how to promote self-directed learning and reflective practices for continuous professional development among teachers?

The findings of this study will contribute to the existing body of knowledge on teacher CPD by providing insights into the mechanisms that foster self-directed learning and reflective practices, and by highlighting the role of these practices in promoting teacher professional growth and student success. The results will also inform the development of effective professional development programs that support teacher self-directed learning and reflective practices.

Understanding teacher career stages and the teacher life cycle is crucial for several reasons when it comes to understanding a teacher's self-directed learning and reflective practices in continuous professional development: *Tailored Professional Development*: by recognizing the different phases or stages of a teacher's career, educators can tailor their professional development efforts to meet the specific needs and challenges of each stage (Brandt, W. C., 2020). This tailored approach ensures that teachers receive the most relevant and effective support for their continuous growth and development.

Personalized Reflection: understanding the career stages and life cycle of teachers allows for personalized reflection on their experiences and progress (Diasti, K. S., & Kuswando, P., 2020). This personalized reflection can help teachers identify areas for growth, set achievable goals, and track their progress effectively. *Continuous Learning*: the career stages and life cycle of teachers provide a framework for continuous learning, as educators move through different phases of their careers (Dinham, J., Choy, S. C., Williams, P., & Yim, J. S. C., 2021). This continuous learning is essential for teachers to adapt to changing educational landscapes, refine their teaching approaches, and make meaningful contributions to student learning outcomes.

Professional Self-Understanding: understanding the career stages and life cycle of teachers can help educators develop a deeper understanding of their professional identity and experiences (Derakhshan, A., Coombe, C., Zhaleh, K., & Tabatabaeian, M., 2020). This professional self-understanding is crucial for teachers to engage in self-directed learning and reflective practices effectively, leading to enhanced professional growth and development.

Huberman's Teacher Career Cycle Model: the model consists of seven stages, each with its own set of characteristics and challenges (Hiew, W., & Murray, J., 2021). By recognizing these stages, teachers can better understand the context in which they operate and adapt their self-directed learning and reflective practices accordingly.

In conclusion, understanding teacher career stages and the teacher life cycle is essential for tailored professional development, personalized reflection, continuous learning, professional self-understanding, and adapting self-directed learning and reflective practices to different stages of a teacher's career. By acknowledging these stages, teachers can enhance their professional growth and development effectively, contributing to improving the educational landscape (Keller-Schneider, M., Zhong, H. F., & Yeung, A. S., 2020; Kwee, C., 2020).

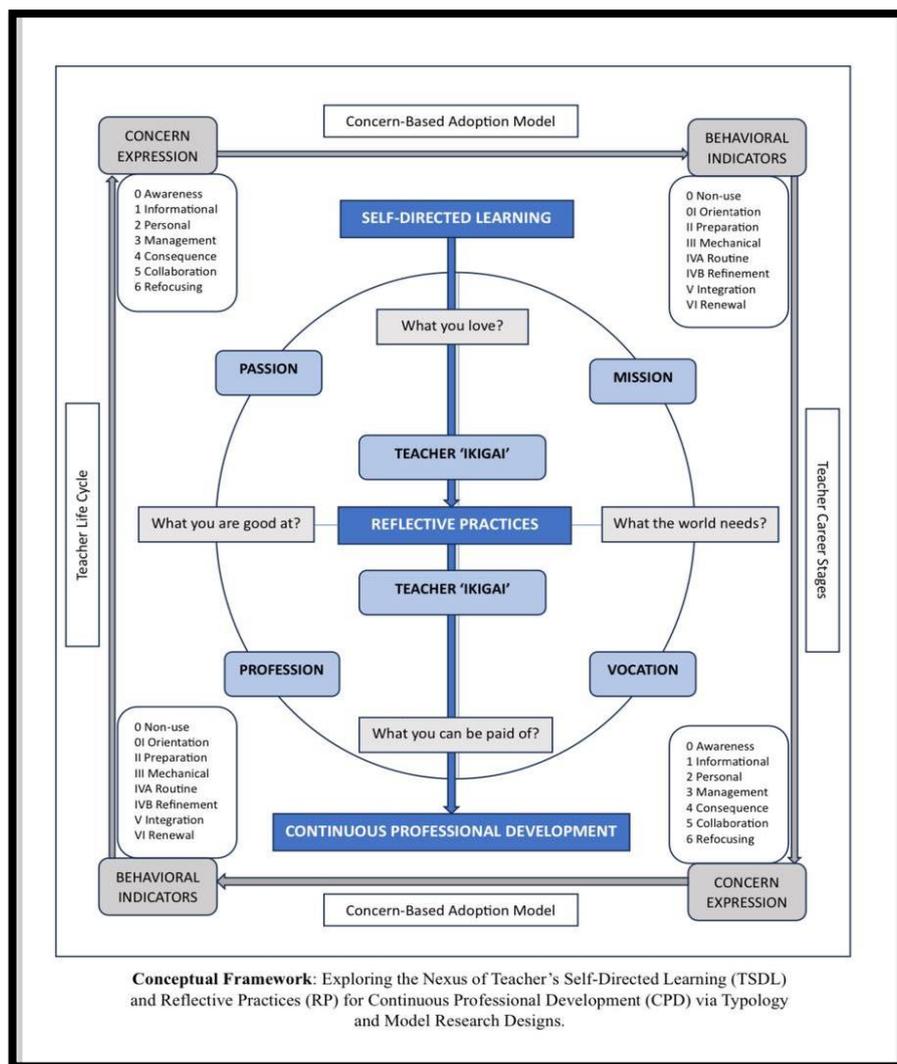


Figure 1: The Conceptual Framework

Figure 1 explains the conceptual framework whereas the purpose of a conceptual framework in a conceptual paper is to synthesize components, guide theories and assumptions, provide a research design blueprint, establish a foundation for literature review, and offer a visual representation of key concepts. By utilizing a conceptual framework, researchers can structure their work effectively, align it with existing knowledge, and enhance the clarity and coherence of their research endeavours (Jaakola, E., 2020; Reese, S. D., 2023).

2.2 Developing the argument: critique, frameworks, and new perspectives

The breadth and depth of understanding *teacher's self-directed learning* and *reflective practices for continuous professional development* encompass a comprehensive exploration of the various facets and intricacies of these concepts. In the context of **self-directed learning**, breadth involves considering the different levels of self-directed learning, such as incidental, collective agency, self-managed, self-planned, and pure self-directed learning. It also encompasses an understanding of the challenges and complexities associated with self-directed learning, including the need for specific strategies like reflection, prioritization, and synthesis (Charokar, K., & Dulloo, P., 2022). The depth of understanding teacher's self-directed learning involves delving into the nuances of self-directed professional development and its potential impact on teachers' continuous growth. This includes recognizing that self-directed learning can lead to improved instructional practices, enhanced content knowledge, and transformative learning experiences for educators. Furthermore, depth encompasses an understanding of the principles and practices of self-directed learning and their application to professional development, such as giving educators choice in activities, encouraging self-designed learning projects, and promoting job-embedded, sustained, and collaborative learning activities (Fakazli, Ö., 2021). In summary, achieving breadth and depth in understanding teacher's self-directed learning and reflective practices for continuous professional development requires a comprehensive exploration of the various levels, challenges, and potential benefits of self-directed learning, as well as a nuanced understanding of its application to educators' professional growth and instructional practices (Goa, E., 2021; Hakki Mirici, İ., & Pulatsü, G., 2022).

The breadth and depth of understanding **teacher's reflective practices** involve a comprehensive exploration of the various facets and intricacies of this concept. In the context of reflective practices, breadth involves considering the different levels of reflection, such as surface, pedagogical, and critical reflection. It also encompasses an understanding of the challenges and complexities associated with reflective practices, including the need for specific strategies like self-observation, self-analysis, and self-evaluation. Additionally, breadth involves recognizing that the level of reflection achievable by teachers is influenced by their experience, skills, and prior knowledge (Hanafi, M., 2019; Hashim, S. N. A., & Yusoff, N. M., 2021). The depth of understanding teachers' reflective practices involves delving into the nuances of reflective professional development and its potential impact on teachers' continuous growth. This includes recognizing that reflective practices can lead to improved instructional practices, enhanced content knowledge, and transformative learning experiences for educators. Furthermore, depth encompasses an understanding of the principles and practices of reflective practices and their application to professional development, such as giving educators choice in activities, encouraging self-designed learning projects, and promoting job-embedded, sustained, and collaborative learning activities (Hung, D. M., & Thuy, P. T., 2021; Khaled, H., 2019). In summary, achieving breadth and depth in understanding teachers' reflective practices for continuous professional development requires a comprehensive exploration of the various levels, challenges, and potential benefits of reflective practices, as well as a nuanced understanding of their application to educators' professional growth and instructional practices (Latta, A., 2023; Lee, H., & Mori, C., 2021).

The breadth and depth of understanding **teachers' continuous professional development (CPD)** encompass a comprehensive exploration of the various facets and intricacies of this concept. In the context of CPD, breadth involves considering the diverse range of learning opportunities and experiences available to educators, such as workshops, collaborative projects, coaching, and webinars. It also encompasses an understanding of the need for sustainable and cost-effective CPD pathways that have a tangible impact on learning and achievement (Perry, E., Halliday, J., Higginson, J., & Patel, S., 2022). Additionally, breadth involves recognizing the importance of integrating diverse instructional strategies, fostering critical thinking, and creating a supportive classroom environment to enhance teaching depth (Imants, J., & Van der Wal, M. M., 2020). The depth of understanding teachers' continuous professional development involves delving into the nuances of effective CPD strategies and their potential impact on educators' professional growth and student learning outcomes. This includes recognizing that self-directed learning and reflective practices are crucial components of CPD, leading to improved instructional practices, enhanced content knowledge, and transformative learning experiences for educators. Furthermore, depth encompasses an understanding of the need to measure the impact of CPD activities and to create sustainable and cost-effective CPD pathways that have a meaningful influence on educators' skills, knowledge, and well-being. In summary, achieving breadth and depth in understanding teachers' continuous professional development requires a comprehensive exploration of the various learning opportunities available to educators, as well as a nuanced understanding of their potential impact on professional growth, instructional practices, and student learning outcomes (Mann, S., & Webb, K., 2022; McChesney, K., & Aldridge, J. M., 2021).

Current trends and issues in self-directed learning and reflective practices among teachers include the **increased emphasis on self-directed learning**: There is a growing emphasis on self-directed learning among teachers, which involves taking responsibility for one's own learning and professional development. This trend is driven by the need for teachers to keep up with the rapidly changing educational landscape and to meet the diverse needs of their students. (Paul, I., & Kumar, K., 2020). **Integration of technology**: Technology is increasingly being used to support self-directed learning and reflective practices among teachers. This includes the use of online platforms, webinars, and virtual conferences to provide teachers with access to professional development opportunities (Saleem, A., Gul, R., & Dogar, A. A., 2021). **Importance of reflection**: Reflection is a critical component of self-directed learning and professional development. It involves teachers taking the time to reflect on their teaching practice, identify areas for improvement, and develop strategies to address these areas (Ong, W. A., Swanto, S., AlSaqqaf, A., & Ong, J. W., 2021). **Collaborative learning**: Collaborative learning is becoming increasingly important in self-directed learning and professional development. This involves teachers working together to share knowledge, skills, and experiences, and to support each other in their professional growth (Ong, W. A., Swanto, S., & Alsaqqaf, A., 2020). **Challenges in implementation**: despite the benefits of self-directed learning and reflective practices, there are challenges in implementing these approaches. These include a lack of time, resources, and support, as well as a lack of understanding of the benefits of these approaches among teachers and administrators (Pang, N. S. K., 2022). **Need for ongoing professional development**: Ongoing professional development is essential for teachers to keep up with the changing educational landscape and to meet the diverse needs of their students. This includes the need for ongoing training and support in self-directed learning and reflective practices (Njenga, M., 2023). These trends and issues highlight the importance of self-directed learning and reflective practices among teachers and the need for ongoing support and professional development in these areas (Ismail, K., Ishak, R., & Kamaruddin, S. H., 2020; Mei Kin, T., & Abdull Kareem, O., 2021).

Some common misconceptions about self-directed learning and reflective practice among teachers include: **self-directed learning is a solitary activity**: self-directed learning is often seen as an individual activity, but it can also involve collaboration with peers, mentors, and other professionals. **Reflective practice is a one-time event**: reflective practice is not a one-time event but rather a continuous process that involves

ongoing self-reflection and self-evaluation. *Reflective practice is only about identifying problems*: reflective practice is not just about identifying problems but also about recognizing strengths and successes and using them to inform future practice. *Self-directed learning and reflective practice are only for struggling teachers*: self-directed learning and reflective practice are not just for struggling teachers but are essential for all teachers to continue to grow and develop professionally. *Self-directed learning and reflective practice are time-consuming*: While self-directed learning and reflective practice do require time and effort, they can be integrated into daily teaching practices and can ultimately save time by improving teacher effectiveness and student outcomes. By addressing these misconceptions, educators can better understand the benefits of self-directed learning and reflective practice and develop strategies to support teacher growth and development (Onyefulu, C., Madalinska-Michalak, J., & Bavli, B., 2023; Pandey, S. R., & Sharma, M. R., 2022).

Some issues, problems, or challenges that may arise when trying to understand teachers' self-directed learning and reflective practice to enhance their continuous professional development include *lack of time*: teachers may have limited time to engage in self-directed learning and reflective practice due to their busy schedules and workload. *Resistance to change*: teachers may be resistant to change and may not be willing to engage in self-directed learning and reflective practice, especially if they have been teaching for a long time and have established routines. *Lack of support*: teachers may not receive adequate support from their schools or colleagues to engage in self-directed learning and reflective practice. *Difficulty in measuring impact*: it may be challenging to measure the impact of self-directed learning and reflective practice on teacher professional development and student learning outcomes. *Unclear process*: teachers may have an unclear picture of how to engage in self-directed learning and reflective practice, which may hinder their ability to develop these skills (Perry, E., Booth, J., Boylan, M., Wolstenholme, C., Chedzey, K., & Cunningham, M., 2021). *Limited understanding of the concept*: Teachers may have a limited understanding of the concept of self-directed learning and reflective practice, which may hinder their ability to engage in these practices effectively. By addressing these issues and challenges, researchers and educators can develop strategies to support teacher growth and development through self-directed learning and reflective practice. Self-directed learning and reflective practice are important for teachers to improve their skills and knowledge continuously. However, there are several **challenges and issues** that teachers may face in implementing these practices. One major challenge is the *lack of time*, as teachers may have other responsibilities and tasks to complete. Another challenge is the *lack of self-motivation and interest*, as some teachers may not be motivated to learn new things or may not be interested in certain topics. Additionally, there may be too many choices or irrelevant information available, making it difficult for teachers to decide what to learn (Popova, A., Evans, D. K., Breeding, M. E., & Arancibia, V., 2022). Other challenges include a *lack of resources, external influences, and navigating curriculum constraints*. Self-directed learning readiness (SDLR) skills can strongly predict academic achievement and outcomes in distance education and lifelong education, and upgrade the quality of learning outcomes in online and offline education. Therefore, students must promote SDL skills that can play crucial roles in online educational environments (Rahman, A., 2021). The study of teacher's self-directed learning and reflective practice faces several **gaps and constraints**. One of the major constraints is the *lack of time*, as teachers may have other responsibilities and tasks to complete. Another constraint is the lack of self-motivation and interest, as some teachers may not be motivated to learn new things or may not be interested in certain topics. Additionally, there may be too many choices or irrelevant information available, making it *difficult for teachers to decide what to learn*. Other constraints include a lack of resources, external influences, and navigating curriculum constraints. Universities are charged with the directive to offer more diverse field experiences within their course requirements. As a result of the directive, not every topic nor instructional scenario can be addressed in the program coursework, challenging the programs to bridge the pedagogical learning gaps of their candidates. The role of choice by pre-service teachers promotes meaningful, purposeful, and valued interaction with the content of the sessions. By aligning the content with the candidates' self-identified learning gaps, candidates can transition more seamlessly from teacher candidates to teaching professionals, taking responsibility for their professional learning. To overcome these gaps and constraints, teachers can collaborate with leaders to redesign curricula, identify resource gaps and advocate for necessary tools, engage in open dialogue with parents and communities, and start small by gradually releasing control to students (Rose, K., 2021; Ruffinelli, A., de la Hoz, S., & Álvarez, C., 2020).

Measuring the effectiveness of self-directed learning and reflective practice in teachers presents **several challenges** (Saeed, M., & Akhtar, M., 2021; Safari, I., Davaribina, M., & Khoshnevis, I., 2020):

- Perspective: Teachers may struggle to see their teaching from alternative perspectives, limiting their ability to gain new insights into their teaching practice.
- Focus: Teachers may not focus on the right aspects of their teaching, dwelling on problems rather than objectively reviewing the lesson as a whole.
- Memory: The ability to accurately recall a lesson some time afterward is limited, making it difficult to assess progress over time.
- Recognizing progress: It is challenging to set measurable benchmarks for progress and objectively assess improvements in teaching practice.
- Understanding of self: Teachers may have certain assumptions about themselves or their teaching practices that can be difficult to identify and objectively assess.

- Isolation: Self-reflection is typically a private experience, making it difficult to share reflections with colleagues and receive feedback.
- Technology: The use of technology to support self-directed learning and reflective practice may not be widespread, limiting the data available for analysis.

To overcome these challenges, teachers can use various tools and methods, such as video technology, peer feedback, and reflective journals, to continuously improve their teaching practice (Saputra, D. B., Suherdi, D., & Rodliyah, R. S., 2020). Additionally, teachers can build a library of practice over months or years to assess progress (Shanmugavelu, G., Parasuraman, B., Arokiasamy, R., Kannan, B., & Vadivelu, M., 2020). Researchers and educators can also develop frameworks and models to guide and scaffold reflective practice in teacher education programs (Slade, M. L., Burnham, T. J., Catalana, S. M., & Waters, T., 2019). Finally, technology can be leveraged to enhance reflective practice and self-directed learning, providing teachers with new ways to reflect on their practice and improve their teaching (Smith, T., 2003).

Measuring the effectiveness of self-directed learning and reflective practice in teachers is subject to several **limitations** (Sejuwal, K., 2017; Suphasri, P., & Chinokul, S., 2021), including:

- Subjectivity: The process of traditional self-reflection relies on subjective assessments, making it challenging to set measurable benchmarks for progress and recognize improvements in teaching practice.
- Isolation: Self-reflection is typically a private, personal experience, making it difficult for teachers to share reflections with colleagues and receive feedback, which can limit the depth of the reflection.
- Memory: The ability to accurately recall a lesson some time afterward is limited, making it challenging to assess progress over time.
- Lack of data: Teachers may not have access to data that would help them measure progress over time, such as student performance data or observations from colleagues or mentors.
- Understanding of self: It's challenging for teachers to objectively assess their own beliefs, attitudes, and biases, as they may have certain assumptions about themselves or their teaching practices that can be difficult to identify.

Research gaps in understanding teacher's self-directed learning and reflective practices for continuous self-professional development include:

- Implementation and effectiveness of self-directed professional development programs (Saleem, A., Gul, R., & Dogar, A. A., 2021; Song, L., & Hill, J. R., 2007).
- Integration of self-directed learning and reflective practices (Taskin, B., 2019).
- Development of self-directed learning skills in EFL teachers (Van Woezik, T. E. T., 2020).
- The role of self-directed learning in teacher autonomy and agency (Walker, D. M., 2022).
- The impact of self-directed learning on teacher motivation and engagement (Weir, C. D., 2017).
- The role of reflective practice in teacher development (Yaacob, A., Mohd Asraf, R., Hussain, R. M. R., & Ismail, S. N., 2021).
- The relationship between self-directed learning and reflective practice in teacher development (Yanuarti, E., 2017).
- The impact of self-directed learning and reflective practice on student learning outcomes (Yanuarti, E., & Treagust, D. F., 2016).
- The role of technology in self-directed learning and reflective practice (Saleem, A., Gul, R., & Dogar, A. A., 2021).
- The development of self-directed learning and reflective practice in pre-service teacher education (Vadivel, B., Namaziandost, E., & Saeedian, A., 2021).

2.3 Review of Previous Research: Theories and Models

Some theories and models for self-directed learning among teachers include: Self-Directed Learning Theory (SDL) empowers individuals to take control of their learning journey, emphasizing intrinsic motivation and personal responsibility. Adult Learning Theory (Andragogy) or Malcolm Knowles' andragogy, a component of SDL, highlights the importance of self-directed learning for adults, who are motivated by internal factors and need to be involved in the planning and evaluation of their instruction (Van Woezik, T. E. T., 2020). The Concern-Based Adoption Model (CBAM) helps teachers understand the stages of adopting self-directed learning and reflective practices, which can inform professional development efforts (Desy Rusmawaty et al., 2023). Stages of Self-Directed Learning Competencies (SSDL) Model proposes that learners advance through stages of self-directed learning competencies, which can be applied to teachers' professional development (Louws, M. L., Meirink, J. A., van Veen, K., & van Driel, J. H., 2017). Transformational Learning Theory focuses on the transformation of personal and professional perspectives, which can be applied to teachers' self-directed learning and reflective practices (Hoggan, C., & Finnegan, F., 2023). These theories and models provide a framework for understanding self-directed learning and reflective practices among teachers and informing professional development efforts. They emphasize the importance of personal responsibility, intrinsic motivation, and collaboration in the learning process (Sims, S., & Fletcher-Wood, H., 2021).

The theories and models for reflective teaching practices among teachers include John Dewey's Reflective Practice Theory: Dewey emphasized the importance of involving the learner in reflection, stating that experiences shape individuals, and when reflective practice is part of learning, meaning, and relevancy are created, which initiates growth and change (Singh, A. K., Rind, I. A., & Sabur, Z., 2021). Schön's Reflective Practice Model: Donald Schön's model of reflection includes two types: reflection-in-action and reflection-on-action. Reflection-in-action occurs during the teaching process, while reflection-on-action takes place after the teaching experience. Schön's model emphasizes the importance of practitioners reflecting on their experiences to improve their practice. Andragogy: Malcolm Knowles' theory of andragogy, which is a component of self-directed learning, highlights the importance of self-directed learning for adults, who are motivated by internal factors and need to be involved in the planning and evaluation of their instruction. This theory is relevant to reflective teaching practices among adult educators (Smith, T., 2003). Personal Theories and Reflective Orientation in Teacher Education: This theory highlights how a narrative and reflective orientation to teacher education can enhance the process of learning to teach mathematics by reframing personal theories that assimilate public theories and possibilities for future action (Smith, T., 2003). These theories and models provide a framework for understanding and implementing reflective teaching practices among educators, emphasizing the importance of personal responsibility, intrinsic motivation, and collaboration in the learning process (Uştuk, Ö., & De Costa, P. I., 2021).

To enhance understanding of teacher's self-directed learning and reflective practices, the following frameworks and models can be implemented effectively: *Gibb's Reflective Cycle*: This cycle consists of four stages: description, feelings, analysis, and conclusion. It provides a systematic approach to reflective practice, helping teachers to identify areas for improvement and develop a deeper understanding of their teaching practices. *Kolb's Learning Cycle*: This model emphasizes the importance of both concrete experience and abstract conceptualization in the learning process. It encourages teachers to be autonomous and self-directed, engaging in critical reflection and experimentation to improve their teaching practices. *Levels of Reflection*: This model describes three levels of reflection: technical, contextual, and critical. As teachers progress through these levels, they develop a deeper understanding of their teaching practices and the context in which they teach. *Schön's Reflective Practitioner*: This model emphasizes the importance of reflection-in-action, where teachers reflect on their actions while they are teaching. It encourages teachers to be more responsive to their student's needs and to make more informed decisions in the classroom. *Self-Directed Learning Framework*: This framework emphasizes the importance of self-directed learning in the classroom. It provides a structure for teachers to help students develop their self-directed learning skills and become more independent learners (Thakur, G., 2012). These frameworks and models can be used to guide and support teachers in their self-directed learning and reflective practices, helping them to enhance their professional development and improve student learning outcomes (Thakur, G., 2012).

Concern-Based Adoption Model (CBAM)

The Concern-Based Adoption Model (CBAM) can help teachers in their self-directed learning and reflective teaching practices by providing a framework for understanding the stages of adopting self-directed learning and reflective practices. CBAM helps teachers identify their concerns related to the change process and adoption of an innovation, which can inform professional development efforts. The model includes five stages of concern: awareness, informational, personal, management, and impact. Teachers can use this model to identify their concerns related to self-directed learning and reflective practices and develop strategies to address these concerns. CBAM can also help teachers understand the importance of collaboration and shared learning in the adoption of new practices (Desy Rusmawaty et al., 2023). In summary, CBAM can help teachers in their self-directed learning and reflective teaching practices by providing a framework for understanding the stages of adopting new practices, identifying concerns related to the change process, and developing strategies to address these concerns. It emphasizes the importance of collaboration and shared learning in the adoption of new practices (Desy Rusmawaty et al., 2023; Henry, A. M., 2020). The Concerns-Based Adoption Model (CBAM) is a framework that provides tools and techniques to gauge staff concerns and program use when implementing a new program or initiative. It focuses on the human element of change, recognizing that each person will respond to a new program with unique attitudes and beliefs, and each person will use a new program differently. The model includes three diagnostic dimensions: Stages of Concern, Levels of Use, and Innovation Configurations. These dimensions provide tools and techniques that enable leaders to identify staff concerns and program use, understand, monitor, and guide the complex process of implementing new and innovative practices. The Stages of Concern process enables leaders to identify staff members' attitudes and beliefs toward a new program or initiative, the Levels of Use interview tool helps determine how well staff are using a program, and Innovation Configurations provide a clear picture of what constitutes high-quality implementation. The model is widely used in educational settings to better understand educators' concerns, behaviors, and variations of use throughout the implementation of an educational innovation. It is a valuable framework for understanding the cognitive concerns of teachers and students and provides a framework to anticipate future needs associated with the adoption of change and research (Khoboli, B., & O'toole, J. M., 2012; Paramasveran, R., & Nasri, N. M., 2018; Sweeny, B., 2003). CBAM focuses on the obstacles people face throughout the implementation process and aids in discovering solutions. In its practices, the CBAM is primarily used in teaching. The conceptual model depicts, explains, and anticipates possible teacher concerns

and behaviours through adopting, adapting, and modifying processes (Hall & Hord, 2015). The concerns-based models look at change and adoption through the eyes of the users. These models focus on how the concerns of individuals influence their adoption of innovation. They also consider the phases of individual technology adoption and how best to facilitate change. The concerns-based models do not focus on the *why* of the innovation, but rather the assumption that an understanding of the concerns and adoption process can facilitate success with the adoption of new technology (Olson, K., Lannan, K., Cumming, J., MacGillivray, H. & Richards, K., 2020).

IKIGAI for teachers

Ikigai for teachers is a concept from Japanese culture that represents the intersection of four fundamental components: what you love, what you are good at, what the world needs, and what you can be paid for. It is a way of life that has been practiced in Japan for over a millennium and is associated with happiness, longevity, and a sense of purpose (García, H., & Miralles, F., 2016). For teachers, finding their ikigai can be a powerful way to connect their professional lives with their passions and values.

It can help them find a sense of purpose and fulfilment in their work, which is essential for maintaining motivation and well-being (García, H., & Miralles, F., 2016). In the context of teaching, ikigai can be understood as the sweet spot where a teacher's love for teaching, their skills, the needs of their students, and the financial rewards of their profession intersect. This alignment can lead to a harmonious balance between their core passion and other endeavours, creating a positive ripple effect that extends beyond the classroom. To find their ikigai, teachers can reflect on their passions, strengths, and the impact they want to have on their students and the world. By aligning these elements, teachers can find a sense of purpose and fulfilment in their work, which can lead to increased job satisfaction and well-being (Sartore, M., Buisine, S., Ocnarescu, I., & Joly, L. R., 2023). Teachers can identify their ikigai in the classroom by reflecting on their passions, strengths, and the impact they want to have on their students and the world. They can also focus on the task at hand, enjoying what they do, and overcoming stress by focusing on the present moment and the task at hand. Additionally, teachers can excel in their profession by finding their ikigai by feeling the energy of life, even in challenging circumstances, and by always showing up, putting forth their noblest effort, and inspiring others (Kono, S., Walker, G. J., Ito, E., & Hagi, Y., 2019). Teachers can incorporate their ikigai into their teaching practices by focusing on the following aspects:

- Reflect on their passions, strengths, and the impact they want to have on their students and the world.
- Embrace the principles of ikigai, such as being always busy but not stressed, by focusing on the task at hand and enjoying what they do.
- Excel in their profession by finding their ikigai, feeling the energy of life, and overcoming stress by focusing on the present moment and the task at hand.
- Show up, put forth their noblest effort, and inspire others, even in challenging circumstances.
- Counter restrictions by always showing up, putting forth their noblest effort, and inspiring others.
- Address the needs of their students and the world by focusing on what they love, what they are good at, what the world needs, and what they can be paid for.
- Overcome stress by focusing on the task and enjoying what they do, even in challenging circumstances.
- Nurture lifelong self-fulfilment and purpose-inspired learning journeys.

By incorporating these aspects into their teaching practices, teachers can find a sense of purpose and fulfilment in their work, which can lead to increased job satisfaction and well-being while using the 3H approach or model introduced by Dr. Tan Ai Mei.

3H Approach (Head-On, Heart-On, Hands-On) for teachers

To produce teachers equipped with vision, passion, and action (competency), Dr. Tan Ai Mei has conducted three years of action research in her classes and developed a teaching model, to be called the '3H Approach to Produce Competent Teachers'. 3H is a teaching model and the transformation of her trainee teachers into reflective and competent practitioners. The incorporation of 3H in the author's training of teachers has given rise to an advancement in pedagogy and knowledge generation as well as an enhancement in teacher professionalism which is partially documented in the book '*Panduan Kerja Kursus Ilmu Pendidikan: Idea, Contoh dan Aplikasi Teori*' (Tan, Ai Mei, 2010). Head-on is a vision or an inquiry mind, sharing of knowledge and ideas towards problem-solving and also known as 'knowledge culture'. Heart-on or passion is a motivation and recognition development of one's greatness, strength, and potential self-esteem and is also known as 'reflection'. Hands-on or action involves thinking about people and living skills through repetitive doing and practice leads to the command of tasks and related generic skills (Tan, Ai Mei, 2010).

3 DISCUSSION-CONCLUSION

3.1 Conclusions and Recommendations

What is the known?

In understanding teacher's self-directed learning and reflective practices for continuous professional development, "the known" refers to established concepts and practices that have been identified as essential components in professional growth. Here is how "the known" is relevant based on the provided search results: *Self-Directed Professional Development*: "The known" includes the understanding that professional development must be self-directed, emphasizing the importance of teachers taking control of their learning. This concept highlights that self-directed learning is a key factor in continuous professional development, allowing educators to tailor their growth to their specific needs and interests. *Reflection as a Central Process*: Another aspect of "the known" is the recognition that reflection is a central process for integrating knowledge and experience in professional development. Reflective practices enable teachers to learn from their experiences, gain new insights, and improve their teaching strategies, contributing to ongoing growth and development. *Deliberate Improvement in Knowledge and Skills*: "The known" also encompasses the idea that professional development involves a deliberate process of improvement in knowledge and skills for teachers, especially those working with students with moderate to severe disabilities (Alghamdi, A. 2021). This understanding emphasizes the importance of continuous learning and skill enhancement in supporting diverse student populations effectively. *Grit and Motivation*: Teachers' grit and motivation are recognized as factors influencing self-directed professional development, contributing to improved self-concept and handling of professional experiences (Albakri, I. S. M. A., Ismail, N., Hartono, R., Tahir, M. H. M., Abdullah, M. S. H. B., Sarudin, A., & Zulkepli, N., 2021). This aspect of "the known" highlights the significance of educators' perseverance, passion, and motivation in driving their continuous growth and engagement in reflective practices. By acknowledging these aspects of "the known," educators can leverage established principles such as self-directed learning, reflection, deliberate improvement, grit, and motivation to enhance their professional development effectively. These known factors provide a solid foundation for teachers to engage in continuous learning, adapt to changing educational landscapes, and make meaningful contributions to student success (Chien, C. W., 2012).

What is the unknown?

In understanding teacher's self-directed learning and reflective practices for continuous professional development, "the unknown" refers to aspects that are not yet fully understood or explored. Here is how "the unknown" is relevant based on the provided search results: *Unique Experiences*: The findings of a self-directed professional development program reflect seven educators' unique experiences with self-directed learning for purposes of professional development (Flipsen, B., & Persaud, S., 2022). This aspect of "the unknown" highlights the importance of individual experiences and the diverse ways in which educators engage in self-directed learning and reflective practices for continuous professional development. *Professional Self-Awareness*: A higher education teacher's professional self-awareness is a developmental process that requires reflection on one's own experiences. This aspect of "the unknown" emphasizes the role of reflection in fostering professional self-awareness and suggests that there may be additional aspects of self-awareness that are yet to be fully understood or explored.

Reflection as a Systematic Process: Reflective practice is described as 'learning through and from experience towards gaining new insights of self and practice' (Finlay, L., & Gough, B., 2008). This aspect of "the unknown" suggests that there may be additional ways in which reflection can be approached and utilized in continuous professional development, beyond the traditional understanding of reflective practice. By acknowledging these aspects of "the unknown," educators can explore new avenues for self-directed learning and reflective practices, tailor their professional development efforts to their unique experiences, and deepen their understanding of professional self-awareness and reflection as a systematic process. In doing so, teachers can enhance their continuous professional development and contribute more effectively to student learning outcomes.

The unknown in understanding teachers' self-directed learning and reflective practices for continuous professional development includes *Individual experiences*: The search results suggest that teachers may have unique experiences with self-directed learning and reflective practices, which may not be fully understood or explored in the current literature. *Professional self-awareness*: The development of professional self-awareness through reflection is recognized as a critical aspect of continuous professional development, but the search results do not provide specific insights into how this self-awareness can be further developed or enhanced through reflective practices (Flipsen, B., & Persaud, S., 2022; Ibrahim, S. A. M., Aziz, A. A., Said, N. E. M., & Ismail, H. H., 2023).

Reflection as a systemic process: While reflection is acknowledged as a key component of continuous professional development, the search results do not provide a systematic understanding of how reflection can be approached and utilized in a structured manner to support teacher growth and development. *Self-efficacy and self-directed learning*: The search results discuss the importance of self-efficacy and self-directed learning in teacher professional development, but they do not provide a comprehensive understanding of how these factors can be further developed or enhanced through reflective practices. *Teacher-directed professional development*: The search results mention an alternative approach to conventional professional development,

known as teacher-directed professional development, but they do not provide a detailed understanding of how this approach can be implemented and its impact on teacher growth and development (Sims, S., & Fletcher-Wood, H., 2021; Singh, A. K., Rind, I. A., & Sabur, Z., 2021).

Heutagogical approach: The search results mention the heutagogical approach to learning and teaching, which emphasizes learner-centeredness and self-directed learning. However, they do not provide a detailed understanding of how this approach can be implemented in teacher professional development or its impact on teacher growth and development. In summary, the unknown in understanding teachers' self-directed learning and reflective practices for continuous professional development includes individual experiences, professional self-awareness, reflection as a systemic process, self-efficacy and self-directed learning, teacher-directed professional development, and the pedagogical approach. Further research and exploration are needed to better understand these aspects and their impact on teacher growth and development (Lock, J., Lakhal, S., Cleveland-Innes, M., Arancibia, P., Dell, D., & De Silva, N., 2021).

What is for future needs?

Future research in the area of self-directed learning and reflective practices among teachers presents both known and unknown aspects that warrant exploration:

Known for Future Research: *Impact on Teacher Effectiveness:* Understanding how self-directed learning and reflective practices influence teacher effectiveness and student outcomes is a known area for future research. Investigating the specific strategies and approaches that enhance teacher performance through self-directed learning can provide valuable insights into effective professional development methods. *Integration into Educational Systems:* Researching how self-directed learning and reflective practices can be integrated into formal educational systems is crucial. Exploring the implementation of these practices within school curricula and teacher training programs can shed light on the best ways to support educators in adopting these approaches effectively. *Development of Support Tools:* There is a need to explore the development of support tools for self-directed learning experiences. Investigating the design and evaluation of tools that facilitate self-directed learning among teachers can contribute to the creation of resources that enhance professional development and reflective practices (Vare, P., Dillon, J., Oberholzer, L., & Butler, C., 2021).

Unknown for Future Research: *Long-Term Impact:* One area for future research is the long-term impact of self-directed learning and reflective practices on teacher retention, job satisfaction, and overall career development. Understanding how these practices influence teachers' professional trajectories over time can provide valuable insights into sustainable professional growth. *Cultural and Contextual Factors:* Exploring the influence of cultural and contextual factors on the effectiveness of self-directed learning and reflective practices among teachers is an unknown area for future research. Investigating how different cultural backgrounds and educational settings impact the adoption and outcomes of these practices can lead to more tailored professional development strategies. *Optimal Training Methods:* Researching the most effective training methods for promoting self-directed learning and reflective practices among teachers is essential. Identifying the training approaches that best support educators in developing these skills can inform the design of professional development programs that maximize teacher growth and student success (Vare, P., Dillon, J., Oberholzer, L., & Butler, C., 2021).

In conclusion, future research in the field of self-directed learning and reflective practices among teachers should focus on both building upon known aspects, such as impact assessment and integration into educational systems, while also delving into unknown areas like long-term effects, cultural influences, and optimal training methods for professional development. The future research in self-directed learning should focus on testing conceptual models, facilitating critical thinking skills, incorporating technology effectively, developing competencies, measuring quality and effectiveness, and defining educator roles to advance the understanding and practice of self-directed learning and reflective practices in educational settings for continuous professional development. It is hoped that by understanding the basic concepts of teacher's self-directed learning and reflective practices for continuous professional development based on the previous introduction of concepts, initial and proposed conceptual models, theories and models, some issues, challenges, misconceptions, the known, the unknown and the future needs, the proposed solution and future project will be the stepping stone to contribute to the successful of creating the effective reflective-thinker teacher.

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