

Exploring the Role of Imaginative and Creative AI-oriented Reflections in English Language Teachers' Professional Development: A Complexity Theory Perspective

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Abstract

Since reflective practice is regarded as a significant professional learning tool for teachers to change, modify, and reform their educational practices, it is important for teachers to move towards a more creative use of reflection. Thus, imaginative and creative reflective practice can serve as a new approach to enhance teaching efficiency, originality, reflectivity, and practicality. Additionally, teachers can utilize Artificial Intelligence (AI) tools to implement reflective practice in creative and imaginative ways to support innovative reflections and address complex teaching challenges. Accordingly, this study employed imaginative and creative reflective practice with a Chat Generative Pre-Trained Transformer (ChatGPT) as a novel AI tool. This study explored how imaginative and creative AI-oriented reflective practice could contribute to the professional development of EFL teachers within a complex educational system. To this end, the perspectives of six novice and experienced EFL teachers were examined through semi-structured interviews, classroom observations, and post-class discussions within a qualitative case study framework. The findings indicated that teachers were able to transform and reform their belief systems by learning new concepts, reflecting on their practices, innovating knowledge and practice, and initiating change through imaginative and creative AI-oriented reflective practice. The study concludes with suggestions on how to engage language teachers in imaginative and creative AI-oriented reflective practices.

Keywords: artificial intelligence, complexity theory, creativity, imagination, reflective practice

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1. Introduction

Second and foreign language instruction is a complex and multifaceted process that comprises a wide array of interconnected elements, methods, and disciplines. These include knowledge of language acquisition, pedagogy, curriculum development, psychology, assessment techniques, and other instructional factors. To continuously engage with these complex elements, teachers need to adopt an iterative, dynamic, emergent, integrated, self-organized, adaptive, and interactive process, as described by Complexity Theory (CT) (Larsen-Freeman, 2019). Accordingly, teachers can develop their knowledge and skills by improving their complex personal, pedagogical, social, and psychological dimensions dynamically and interactively. This can be achieved by observing, monitoring, and advancing a diverse array of knowledge, practices, beliefs, and theories in a systematic and creative way (Ferreira et al., 2024). Thus, both experienced and novice EFL teachers need to enhance their professional, social, and personal practices by promoting their Continuous Professional Development (CPD) through creative, interactive, flexible, and reflective approaches (Ateek & Issa, 2024).

Reflective practice, a systematic professional tool for establishing and reforming teachers' practices, can be conducted through observing, analyzing, evaluating, and adapting instructional knowledge and practice (Gudeta, 2022). Teachers can use reflective practice to identify and solve problems, enhance their noticing skills, learn from complexities, connect theory and practice, learn experientially, make sense of experience, and develop professional knowledge and skills within a complex system (Arefian, 2023). However, reflective practice should move beyond traditional descriptive reflections by encouraging teachers to engage in imaginative and creative reflective practices to solve problems, foster new knowledge generation and practice development, and innovate their teaching methods (Akbari, 2007). This type of reflection involves exploring alternative perspectives, experimenting with new strategies, and envisioning possibilities for improvement (Cremin & Chappell, 2021).

With the emergence of new technological innovations, novice and experienced EFL teachers can use Artificial Intelligence (AI) to develop professionally by organizing the complex system of knowledge and acquiring practical skills through intelligent systems (Liu & Chang, 2024). Moreover, novice and experienced EFL teachers can reflect on their complex practices by interacting with various AI tools to enhance their CPD. Thus, AI tools and reflective practices can enhance teachers' professional development by offering immediate feedback on their teaching methods, student outcomes, and classroom discourse; personalized learning experiences with customized resources; data-driven decision-making through the collection and analysis of information on students, teaching, assessment, and curriculum; tailored strategies based on teachers' needs and weaknesses; and opportunities for self-assessment and growth (Celik et al., 2022; Teng et al., 2023). Furthermore, AI tools can pose critical and reflective questions, monitor progress over time, and guide teachers toward deeper critical inquiry. Additionally, AI can shape

professional communities of practice by connecting teachers with similar interests and needs, supporting continuous development through reflective and collaborative practices (Kim, 2024).

One such professional AI tool is Chat Generative Pre-Trained Transformer (ChatGPT). Henceforth, novice and experienced EFL teachers can use ChatGPT to interact and reflect on their practices, receive personalized guidance and support, gain authentic content, and evaluate their own teaching practices creatively (Jeon & Lee, 2023; Kohnke et al., 2023; Moorhouse, 2023). Likewise, novice and experienced EFL teachers can use ChatGPT-oriented reflective practice to creatively generate lesson plans, authentic instructional tasks, and assessment tasks; evaluate their teaching development and quality; link theory and practice; learn how to manage their classes; and enhance their professional development (Celik et al., 2023). Therefore, novice and experienced EFL teachers can reflect with the help of ChatGPT, either collectively or individually, to think, plan, act, observe, and reflect creatively and imaginatively. Given the fact that a considerable amount of research attention has been devoted to descriptive reflections, teachers can now implement reflective practice creatively and imaginatively through AI-oriented tools like ChatGPT.

It is assumed that ChatGPT can support imaginative and creative reflective practice by providing new ideas and practices, generating novel solutions, creating innovative materials and tasks, and connecting theories and practices in creative ways (Bozkurt et al., 2023). In this way, imaginative and creative ChatGPT-oriented reflective practice can help teachers use ChatGPT as a tool for reflecting on their teaching practices while employing imagination and creativity to enhance their pedagogical methods. It is necessary to conduct imaginative and creative ChatGPT-oriented reflective practice to solve problems by considering and reflecting on various creative approaches and solutions; to learn adaptability and tailor responses and actions to meet contextual needs; to receive and learn from feedback in order to adjust actions and apply new strategies; and to push beyond boundaries through creativity and reflection (Karadağ, 2023; Liu et al., 2023). Hence, ChatGPT can help teachers generate feedback on teaching practices and lesson plans, brainstorm creative teaching strategies, and provide different viewpoints or new questions (Esfandiari et al., 2025). Teachers can integrate their imaginative and creative reflection with ChatGPT's capabilities to reflect more deeply on their teaching, generate innovative ideas, and foster a dynamic and adaptive teaching practice. Moreover, imaginative and creative ChatGPT-oriented reflective practice can promote creative and systematic knowledge generation, facilitate mindful and innovative problem-solving, introduce novel instructional practices, and help make sense of teaching experiences in a creative and holistic manner.

Novice and experienced EFL teachers' imaginative and creative ChatGPT-oriented reflective practice can enhance their adaptability and deepen their understanding of relevant connections, emergent learning, and self-organization within a complex system, imaginatively and creatively (Kohnke et al., 2023). Although previous research has extensively investigated teachers' human-oriented reflective practices (Farrell, 2022), little research has addressed the significance of imaginative and creative ChatGPT-oriented reflection in enhancing novice and experienced EFL

teachers' professional development through the lens of Complexity Theory (CT) (Farrell, 2022). Motivated by this knowledge gap, the present study, drawing on CT, explores how imaginative and creative ChatGPT-oriented reflective practice can enhance novice and experienced EFL teachers' professional development.

2. Literature Review

2.1. Teachers Reflective Professional Development

Teachers can use reflective practice to modify, develop, and upgrade their teaching practices and knowledge by reflecting on new and novel experiences, practices, strategies, and situations, leading to the development of their CPD (Farrell, 2015). Reflection allows teachers to “stop, look, and discover where they are at that moment and then decide where they want to go in the future” (Farrell, 2012, p. 7). Similarly, Loughran (1996, p. 21) illustrates that it is “the purposeful, deliberate act of inquiry into one’s thoughts and actions through which a perceived problem is examined so that a thoughtful, reasoned response might be tested out.” EFL teachers can receive a wide range of advantages from reflections, such as evaluating teaching-related factors, bridging previous gaps in knowledge and practices, having self-directed experiences, and developing professionally (Arefian, 2023). Furthermore, teachers can implement reflective practice to examine their teaching experiences, make clever decisions, boost their noticing skills, raise their awareness of numerous teaching aspects, and modify their traditional practices within a complex, dynamic system (Gkonou & Miller, 2020).

While diverse approaches and methods have been introduced to enhance the process of reflection, the dominant emphasis on retrospective and problem-solving aspects over enriching ones has made reflective practice ordinary by ignoring teachers' creativity and imagination. So, reflective practices should move from simple descriptions of technicalities to imaginative and creative reconstructions (Farrell & Kennedy, 2019). Despite the systematic ways these reflective approaches are presented, it is believed that we are restricting the potential one can gain from reflection by ignoring how it can be more imaginative and creative. It can be understood that reflection needs more emphasis on the imagination, creativity, and artistic conduct of teachers in a holistic manner to include diverse arrays of cognitive, affective, and creative aspects of learning to teach by dealing with the complexities of teaching (Farrell, 2022).

Imaginative and creative reflective practice can help novice and experienced EFL teachers become more adaptive and open-minded, perceive the connections and relationships among various teaching variables creatively, improve emergent and exploratory learning imaginatively, and create a self-directed and agentic learning environment resourcefully, which are significant for enhancing their CPD (Greenier & Whitehead, 2016). When teachers encounter the challenging complexities of teaching with imaginative and creative reflection, they can build the basis to understand concepts more reasonably, break traditional beliefs and biases, analyze events more

creatively, modify practices innovatively, link new knowledge and novel practices, and integrate various teaching factors creatively through reflective practice (Zwozdiak-Myers, 2018). While creativity and imagination can be crucial to adding novelty to teachers' reflective practices (Meihami, 2022), there are scarce studies investigating the role of imaginative and creative reflective practice in enhancing novice and experienced EFL teachers' CPD.

2.2. Teachers' Imaginative and Creative ChatGPT-Oriented Reflections

In the fast-paced world of technology and education, where information, knowledge, and skills are constantly evolving, educators need effective tools to support their teaching efforts and improve their students' learning. In this context, AI has emerged as a promising avenue for teachers to update their knowledge and practice, overcome teaching complexities and challenges, and increase their productivity (Luan et al., 2020). One AI tool that has gained attention recently is ChatGPT, which can generate intelligent and relevant responses to questions, offer immediate feedback, become personalized learning assistance, and meet learning needs and interests (Moorhouse, 2023). So, novice and experienced EFL teachers can use ChatGPT to obtain appropriate content, gain relevant teaching approaches and authentic tasks, foster their lesson planning, and prepare assessment tasks and grade them (Baidoo-Anu & Owusu Ansah, 2023). Furthermore, they can improve their CPD by finding related scholarly articles and books, searching for effective online and recorded courses and clips, learning to reflect on problems and issues, identifying gaps in knowledge and practice, and enhancing collaborative and reflective learning among teachers (Bridgeman & Shipman, 2022).

Novice and experienced teachers can engage in imaginative and creative reflective practice collectively in teams and individually while interacting with ChatGPT to enhance their cognitive, creative, and social practice and development. Imaginative and creative ChatGPT-oriented reflective practice can assist teachers in developing the capability to solve problems effectively, connect new and old meanings to perceive relationships meaningfully, think imaginatively and realistically, enhance teaching efficiency and originality, and create opportunities creatively (Arefian, 2023). Moreover, teachers can cultivate their mindfulness and creativity by employing imaginative and creative ChatGPT-oriented reflection (Liu et al., 2023), thereby achieving higher levels of efficiency. Imaginative and creative ChatGPT-oriented reflective practice helps teachers generate practical ideas, reflect on teaching creatively, identify solutions to relevant challenges inventively, recognize unique concepts and connections imaginatively, and establish associations between theory and practice mindfully through AI-based ChatGPT (Kohnke et al., 2023).

However, an overreliance on AI may undermine teachers' creativity and collaboration, which could adversely impact the creative, emotional, and social growth of teachers (Morrison, 2023). Novice and experienced EFL teachers need to learn how to use AI tools ethically and logically in order to utilize their cognitive resources and initiative, rather than relying extensively on AI. Also,

they should seek support from other teachers, educators, and stakeholders to receive emotional, social, reflective, and creative assistance. Although imagination and creativity have been studied comprehensively for different groups of teachers (Henriksen et al., 2021), the role of novice and experienced EFL teachers' imaginative and creative ChatGPT-based reflections in enhancing their CPD has not received enough attention. This study seeks to investigate how imaginative and creative ChatGPT-oriented reflective practice can enhance novice and experienced EFL teachers' CPD in a complex educational system.

2.3. Theoretical Framework

CT is a dynamic, adaptive, emergent, and self-organizing system. It underscores how systems are developed, transformed, learned, and evolved through interactions, events, and emergent processes that involve creativity, exploration, organization, reflection, and imagination (Mason, 2008). In this way, CT replaces the linear mode of learning with a dynamic interaction among relations, constituents, and environmental factors in a reflective and creative approach (Davis & Sumara, 2006). These elemental agents possess multidimensional connections and engage in adaptive interactions across experiences, events, and situations to create novel and meaningful patterns through creative reflective practice (Haggis, 2008). Through feedback cycles and loops, learning occurs via gradual, reflective, and creative adaptations and developments, whereby small changes accumulate to bring about significant transformations. Therefore, complex systems can be seen as self-creating and self-recreating entities that emerge from the interplay of smaller elements through creative and reflective processes (Haggis, 2008). This theoretical framework, originally rooted in other disciplines, has now been applied to teacher education and professional development.

Teaching is regarded as a complex endeavor encompassing numerous interacting dimensions drawn from different disciplines and fields (Farrell, 2022). It is represented as a complex and dynamic framework through which teachers generate new questions, inquiries, and interpretations to transform and reshape the contextual conditions of learning to teach (Davis & Sumara, 2006). Hence, as noted by Opfer and Pedder (2011), the goal of research on professional development is the recognition of “emergent patterns of interaction within and between levels of activity that would constitute an explanatory theory of teacher learning as a complex system” (p. 379). To this end, multiple complex systems—including those of teachers, schools, students, professional learning activities, and scholarly findings—can recursively, reflectively, and creatively influence teachers' professional development. These systems are integrated, influential, and emergent within a socially constructed and holistic framework (Cameron & Larsen-Freeman, 2007). It can be inferred that EFL teachers need a systematic tool that enables analytical, creative, and imaginative reflection to connect these components and make sense of the complexities in their teaching contexts.

Additionally, engaging in ChatGPT-oriented reflective practice grounded in imagination and creativity can help EFL teachers adapt by considering diverse possibilities and potentials, thereby achieving a deeper understanding of the multiple complex components involved in an AI-supported system (Meihami, 2022). Teachers can also observe, examine, plan, act, evaluate, and create in a cyclical, creative, and imaginative manner; employ differentiated teaching strategies based on needs analysis; and make sense of novel experiences through creative reflective practice with the support of ChatGPT (Esfandiari et al., 2025). Furthermore, they may gain increased agency to organize and guide their imaginative and creative learning by reflecting on new experiences with ChatGPT, experimenting with innovative solutions, and receiving constructive feedback from both experts and ChatGPT within an iterative feedback loop (Scheer et al., 2012). Although teachers have been extensively studied through the lens of reflective practice (Freeman, 2016; Farrell, 2018), the ways in which their imaginative and creative ChatGPT-oriented reflective practices can enhance their CPD within a complex educational system warrant further investigation (Rosen et al., 2024). Therefore, the present study addresses the following research question:

- How do Iranian novice and experienced EFL teachers perceive the role of imaginative and creative ChatGPT-oriented reflective practices in improving their CPD within a CT?

3. Method

3.1. Context and Participants

This study was conducted at a private language school in Iran. In the Iranian educational system, there are two primary sectors for English language education: the public and the private. The public sector is administered by the government, with the Ministry of Education overseeing textbook development, methodology, curricula, assessment procedures, and overall educational policy and planning. In contrast, the private sector tends to adopt international textbooks, implement its own curriculum, and develop distinct policies and practices. Language schools in the private sector are generally more flexible in their approach to teaching methodology and professional development, and they independently design their systems for teacher recruitment and CPD. In light of this, the private sector was selected for the present study, as these institutions are more open to implementing innovative and creative professional development initiatives and integrating technology into instruction.

Accordingly, six EFL teachers—three experienced and three novice (each group consisting of two males and one female), all of whom were native Persian speakers—were purposively selected for participation. In qualitative case studies, such as the present one, small sample sizes are deliberately chosen in order to prioritize depth over breadth, with detailed, in-depth insights taking precedence over the inclusion of a large number of participants (Okoko et al., 2023). As Creswell and Poth (2018) stated, “researchers typically choose no more than four or five cases” in case study designs (p. 161). Therefore, the number of participants in the present study aligns with established

qualitative research guidelines. Data saturation, although a debated concept in qualitative research, is commonly understood as the point at which additional data collection yields no new information. Following this principle, data collection continued until it became evident that the seventh and eighth potential participants provided redundant information. Consequently, only the data from six participants were included in the final analysis.

Participants were selected based on their regular engagement in reflective practices, allowing the study to explore how imaginative and creative ChatGPT-oriented reflection influences their professional development. Participants' ages ranged from 21 to 38 ($M=28$, $SD=5.30$). The novice teachers had between one to three years of teaching experience, while the experienced teachers had seven to fifteen years. All participants were Iranian, based in Tehran, and were employed as junior EFL teachers at a private school. They either held or were pursuing an M.A. degree in Teaching English as a Foreign Language (TEFL) from private universities in Iran. These teachers were employed part-time at the same institution, teaching additional language classes scheduled in the evening. Reflective practices such as peer observation, journal writing, and group discussion were regularly used in their teaching routines. Moreover, the school had instituted mandatory reflection monitoring conducted by supervisors and promoted reflective practices, action research, inquiry-based approaches, and team teaching to support teachers' ongoing professional development. In addition, to adhere to ethical research standards, informed consent was obtained from all participant teachers prior to data collection. Participants were assured that ethical considerations, particularly those related to confidentiality and anonymity, would be strictly observed. To foster a safe and open environment, efforts were made to ensure that the teachers felt comfortable sharing their views freely. To protect their identities, pseudonyms were assigned to each participant. Table 1 presents the demographic information of the participating teachers.

Table 1

The Teachers' Demographic Information

Teacher	Age	Experience (Year)	Degree	Gender	Field of Study	Level of Teaching
ET1	38	15	MA	Male	TEFL	Experienced
ET2	28	7	MA	Male	TEFL	Experienced
ET3	30	8	MA	Female	TEFL	Experienced
NT4	21	1	MA	Male	TEFL	Novice
NT5	24	3	MA	Female	TEFL	Novice
NT6	28	2	MA	Male	TEFL	Novice

3.2. Design and Data Collection

A qualitative research methodology was employed to explore the inquiry, allowing for a comprehensive investigation into the behavioral patterns, perceptions, and experiences of both novice and experienced EFL teachers as they engaged in imaginative and creative ChatGPT-oriented reflective practice for their initial and ongoing professional development. An in-depth qualitative case study design was selected to enable an in-depth exploration of a small number of participants, providing rich, contextualized data on a complex phenomenon. This approach

facilitated the comparison and contrast of novice and experienced teachers' experiences, perceptions, challenges, and benefits associated with engaging in ChatGPT-based reflective practices within a specific educational setting (Mackey & Gass, 2015). Participants were purposefully selected based on several criteria, including institutional setting (private language schools), geographic location (Tehran, Iran), teaching experience (novice vs. experienced), technological competency (familiarity with ChatGPT), and academic background (MA in TEFL).

Complexity Theory (CT) was used as the theoretical lens to inform the study's design and data collection. CT emphasizes the dynamic, adaptive, emergent, and self-organizing nature of systems, which aligns with the study's aim of exploring how teachers' professional development evolves through imaginative and creative engagement with AI tools. From this perspective, the study examined how teachers' interactions with ChatGPT and their reflective practices contributed to emergent patterns of professional learning, adaptation, and transformation within the broader complex educational system. Data collection tools—including semi-structured interviews, post-class discussions, and classroom observations—were designed to capture the iterative and emergent nature of teacher learning, shifts in beliefs and practices, and the adaptive responses shaped by AI-mediated reflection.

In this study, *imaginative and creative reflective practice* was operationally defined as the teachers' ability to generate novel and innovative teaching strategies, critically examine and reform existing pedagogical practices, and flexibly adapt their instructional approaches through reflective interactions with ChatGPT. This construct encompasses identifying and implementing new methods, setting imaginative goals, devising and testing creative plans, and evaluating the effectiveness of these practices. It also involves collaborative engagement through peer discussions and the use of ChatGPT feedback to iteratively refine teaching approaches. This practice is marked by a disposition toward non-linear thinking, the integration of AI-generated insights, and the creation of dynamic, responsive classroom environments.

In the initial phase of data collection, participants were purposively selected based on their familiarity with reflective practice, ChatGPT, and teaching English as a Foreign Language (EFL). Invitations were extended via email, accompanied by an invitation letter outlining the overall process and nature of the study, including its duration, stages, and expectations regarding reflection and interviews. The participating private language school expressed a strong interest in supporting this study to enhance its teachers' knowledge in areas such as creativity, AI literacy, and reflective practices. Participation was voluntary, and all selected teachers signed a consent form prior to the commencement of the study. To gain insight into their teaching practices, the researcher conducted classroom observations both before and after the implementation of imaginative and creative ChatGPT-based reflective practice. Each teacher was observed during two one-hour sessions—one pre-intervention and one post-intervention. The researcher adopted an unstructured observation method without pre-established checklists to explore how behavior patterns, instructional practices, and pedagogical orientations changed reflectively, creatively, and interactively as a result of

engaging with ChatGPT. Following the initial observation, a two-hour workshop was held by the researcher to introduce the participants to the principles, processes, and potential benefits of imaginative and creative ChatGPT-oriented reflective practice. The workshop equipped the teachers with the necessary knowledge and skills to carry out ChatGPT-mediated reflections over the three-month study period.

Throughout the study, participants were encouraged to plan, implement, observe, and reflect on their instructional practices with a focus on creativity, flexibility, and interaction. They were guided to move beyond traditional methods and foster a more dynamic, adaptive classroom environment by utilizing ChatGPT before and after their teaching sessions. The teachers engaged in imaginative and creative reflective practices by identifying innovative daily teaching strategies, conducting critical reflections, analyzing classroom dynamics, setting goals and objectives, and developing creative teaching plans through interaction with ChatGPT. They implemented new strategies in the classroom, shared insights with colleagues during peer meetings, received feedback from both AI and peers, and constructed new professional knowledge through firsthand experiences with AI-supported reflection. Furthermore, bi-weekly two-hour group meetings were held, bringing novice and experienced EFL teachers together to discuss their experiences with imaginative and creative ChatGPT-based reflective practices. These meetings provided a collaborative space for exchanging perceived benefits, proposing creative solutions, addressing challenges, identifying pedagogical gaps, and developing imaginative responses. ChatGPT was also used during these sessions for additional guidance, resources, and real-time feedback. The researcher attended all meetings as a participant observer, focusing on documenting reflective behaviors and creative engagements. Field notes were taken during the sessions, which were also audio recorded for subsequent transcription and analysis.

Finally, three semi-structured interviews were conducted with each of the participants to gather in-depth qualitative data. As Mann (2016) notes, interviews are particularly effective tools for eliciting retrospective and introspective insights, making them well-suited for understanding participants' evolving perspectives and reflective experiences. The interviews were conducted by the researcher, audio-recorded with the participants' consent, and subsequently transcribed for detailed analysis. Each interview session lasted approximately 45 minutes per participant. The interview questions were designed to explore how the participants' beliefs, teaching theories, pedagogical principles, classroom practices, and instructional techniques evolved over time. Additionally, the interviews aimed to investigate how participants addressed the complexities of teaching and the extent to which they became more creative, analytical, and systematic through the implementation of ChatGPT-oriented reflective practices.

3.3. Data Analysis

The collected data were analyzed following the principles of thematic analysis as provided by Braun and Clarke (2006). This method was selected for its ability to detect detailed insights into participants' perceptions, facilitating a thorough understanding of the present issues. The data included audio and video recordings from classroom observations, discussion sessions, and semi-structured interviews, all of which were transcribed manually by the researcher. To ensure the accuracy and quality of these transcriptions, they were further reviewed and refined by another expert in applied linguistics. This process involved modifications and adjustments for content clarity, linguistic nuances, punctuation, and consistency to improve the reliability of the transcripts. The analysis followed a systematic, multi-step process. The first phase involved familiarization with the data. At this stage, the researcher conducted a word-for-word transcription and repeatedly read them to gain a profound understanding of the background, aims, and context of the cases. This initial stage enabled the researcher to comprehend the nuanced details of participants' responses and to identify main ideas for potential codes.

Then, the coding process was conducted. The researcher worked systematically through the whole data set and assigned codes to definite parts of the text that were considered significant to the research questions. Codes emerged directly from the data rather than being predefined, through an inductive approach. During this part, the researcher paid attention to ensuring that coding was consistent and transparent. To enhance rigor, the coded data were periodically reviewed by the second researcher to check for consistency and coherence, making sure that the coding process was accurate. Following this, the researcher put and grouped similar codes into categories. This process required careful adjustment and refinement of the initial codes to ensure they could be organized into broader, more abstract categories that captured the overarching themes present in the data. In line with the recommendations of Strauss and Corbin (2008), the researcher iteratively examined the categories, making adjustments to ensure that they captured the deeper patterns and relationships within the data. After establishing categories, the identification of themes was implemented. A theme signifies a broader level of meaning and includes several categories that share a common code. At this point, the data were examined holistically to ensure that themes were not only internally coherent but also distinct from one another. Peer debriefing sessions were conducted among the researchers to ensure robustness. In these sessions, the researchers reviewed the identified themes, discussing which codes should be listed under each theme. This collaborative approach was designed to increase the trustworthiness of the analysis by incorporating different perspectives and minimizing potential biases. The use of Cohen's Kappa to calculate inter-rater reliability further strengthened the rigor of the process, yielding a 95% agreement rate between coders.

Once the themes were confirmed, the analysis moved to the review and refinement stage, where themes were identified, named, and defined in greater detail. During this stage, the researcher ensured that each theme was well-supported by the data and that it accurately reflected the underlying patterns and meanings present across the cases. Any themes that were found to

overlap or lack sufficient evidence were either redefined or merged with others to maintain the clarity and integrity of the analysis. The final stage of the analysis encompassed theorizing from the themes. This included interpreting the themes in relation to the research question and the broader theoretical framework of reflective practices in teaching. The identified themes were compared and contrasted across cases to draw conclusions about the imaginative and creative ChatGPT-oriented reflective practices, the barriers and enablers to professional development, and the complexities faced by EFL teachers. By moving systematically from raw data to codes, categories, and finally themes, the analysis provided a broad understanding of how reflective practices could improve teachers' professional development and their ability to navigate teaching complexities. Further negotiations among the researchers were undertaken to finalize the credible and meaningful analysis. The careful, iterative nature of this process guaranteed that the thematic analysis was both systematic and transparent, meeting the expectations for rigor and trustworthiness in qualitative research.

4. Results

4.1. Imaginative and Creative ChatGPT-oriented Reflections Improving Teachers' Professional Development

Novice teachers had a limited range of experiences as they were graduates of teacher training universities. They used reflective practice to identify and fix problems in their early teaching by noticing patterns of complex behaviors, teaching factors, and students' performance, ranging from negative to positive experiences. The initial reflective practice of novice teachers was more descriptive and problem-solving oriented, with limited creativity and imagination to make sense of, connect, and generate various complex instructional elements, knowledge, and practices. As novice teacher 2 (NT2) stated: "As a novice teacher with few years of experience, I reckon that reflection helped me gain sufficient professional experience that could lead to the identification of perceived problems to solve and description of my teaching behavior. But, I only focused on my teaching rather than students." So, it was hard for novice teachers to meet the particular needs of the setting and context, since their reflection at initial stages focused solely on their own teaching behavior.

However, some novice teachers stated that they could be more imaginative and creative in enhancing and facilitating the organization of the complexities of the first years of teaching by using ChatGPT. As the researcher noted: "They could use ChatGPT to change their teaching style based on their students' needs and competences. Also, they tried to meet the expectations of the specific teaching context by interacting with this AI tool." They could observe more experienced colleagues to have a real model of practical classroom teaching and learn to manage instructional complexities, which was different from theoretical considerations in textbooks. Also, novice teachers could provide and receive feedback from ChatGPT and other experienced teachers through collaboration with the AI and their colleagues. By focusing on creativity and imagination through ChatGPT-based

reflective practice, they gradually used ChatGPT to find suitable methods, techniques, and learning procedures in an eclectic manner, leading to the development of a personalized and contextually appropriate teaching approach. Furthermore, they sought to gain professional experience from ChatGPT and peer feedback, and to learn from complex teaching-related factors. Teaching was seen as a complex process involving numerous dimensions for novice teachers, making it difficult for them to learn how to manage all the necessary steps. As stated by NT1: “ChatGPT-based reflective practice can not only lead to fixing problems and noticing experiences but also it can creatively help me understand things related to teaching and learning. Hence, we can reach a more creative understanding of complex teaching factors.” Thus, imaginative and creative ChatGPT-oriented reflection helped them handle, integrate, and link different teaching dimensions meaningfully, as teaching-related factors are dynamic and complex. Although the participants of this study were familiar with reflective practice and had used it in their daily routines at surface levels—such as identifying problems, recognizing gaps, and observing—they realized that imaginative and creative ChatGPT-oriented reflective practice could help them think and reflect more holistically by incorporating creativity.

“I have taught for around two years, so the only way I can bridge the gap in my experience is to reflect on my practices and learn from ChatGPT, engage with my experienced colleagues, observe others’ classes, gain feedback from different stakeholders and ChatGPT, and change holistically, personally, socially, professionally, and emotionally. (NT3)”

Also, novice teachers realized that practical knowledge could emerge dynamically, as they had to observe their behaviors, reflect on them creatively, receive feedback, modify theories and practices, and organize their current interactions. Thus, they could enhance their professional knowledge and skills more reflectively via ChatGPT. Likewise, the ChatGPT-oriented reflective practice could be enriched through their creativity and imagination, enabling them to envision novel ideas, implement them creatively, and evaluate their practices and knowledge reflectively with the help of ChatGPT. When novice teachers used ChatGPT in imaginative and creative ways, they reached a deeper level of reflective practice, considered different perspectives, became more open to change, and developed a critical understanding of students’ learning, curriculum, and school culture. “Creativity helped my ChatGPT-oriented reflective practices. I changed and enhanced my grammar teaching by using more tasks, meaningful practices, real-world exposure, and noticing techniques to enhance students’ grammar learning by integrating ChatGPT in my reflections (NT2).”

On the other hand, experienced teachers, who had various teaching experiences with numerous groups of learners in different settings, could think critically, evaluate their practices mindfully, and critique educational and teaching factors innovatively through imaginative and creative ChatGPT-oriented reflection. This enabled them to become more sensitive in their routine practices and to reform and change their past experiences constructively, reflectively, and creatively with the aid of ChatGPT. As ET2 confirmed, he “could break the routines through presenting

differently, teaching more innovatively, having a student-centered class, enhancing their authentic production, assigning interesting homework, and utilizing technology and artificial intelligence throughout teaching, as he used ChatGPT.” Moreover, by using imaginative and creative ChatGPT-oriented reflective practice, they could develop their CPD innovatively, transform previous practices creatively, and understand students’ needs more effectively. They grew internally and developed a deeper understanding of the complexities of their particular contexts. One teacher stated, “I used imaginative ChatGPT-oriented reflective practice to know my students’ weaknesses and strengths through various tools, assessments, and tasks in a novel way to know what effective and helpful strategies, techniques, and approaches I have to follow to fulfill the gap creatively (ET1).” Thus, they could balance the complexities of a teaching career and enhance educational and academic quality innovatively, apply targeted strategies in diverse ways, regenerate knowledge holistically, and engage students creatively by implementing ChatGPT-oriented reflections. Though some strategies were similar between the two groups, experienced teachers were able to adopt a deeper level of imaginative and creative ChatGPT-oriented reflection in their practices.

“Having ten years of professional experience in teaching does not mean I am experienced. To me, teachers who are experienced are those who constantly learn, so I will try to think, reflect, and judge my practices in light of standards and guidelines and criticize practices with ChatGPT. I believe reflecting on my new experiences, practices, and occurrences with AI can be a source of learning, acting as fuel for my professional development.” (ET3)

“Umm...as I am an experienced teacher, I believe that reflection with ChatGPT motivated me to find a novel approach to teaching and update my professional knowledge of students, curriculum, learning, teaching, and other aspects more creatively. In this case, I used cutting-edge technological approaches and techniques to heighten the quality of learning and make my students more active and creative.” (ET2)

The above extracts underscored that imaginative and creative ChatGPT-oriented reflective practice could encourage experienced EFL teachers to change their beliefs, theories, practices, and techniques creatively. Also, creativity and imagination could improve their ChatGPT-oriented reflective practice by becoming growth-minded and engaged, fostering their consciousness and noticing, and improving originality and effectiveness.

4.2. Benefits and Challenges of Imaginative and Creative ChatGPT-Based Reflection for Professional Development

Holistic, imaginative, and creative ChatGPT-oriented reflections offered numerous personal, professional, and technical benefits for both novice and experienced EFL teachers. For novice teachers, imaginative and thoughtful ChatGPT-oriented reflections made their practices both systematic and artistic, as they explored new methods unfamiliar to their students, experimented with strategies that led to unexpected outcomes, and transformed the entire teaching,

learning, and educational process holistically by working with AI-based ChatGPT. As mentioned by NT1: “When I used creative reflections with ChatGPT to enhance teaching listening parts, I could see how I can adapt my teaching style, tasks, procedures, assessment, and other instructional matters to foster students’ listening competence, interests, engagement, and achievement.”

Novice teachers stated that they could create, generate, and reorganize meanings, practices, and thoughts they had not encountered before by approaching their teaching differently and acquiring creative teaching skills through reflective engagement with ChatGPT. As the researcher observed: “This is because they could understand different insights, various strategies, novel teaching theories and approaches, and creative thought generation by using ChatGPT-oriented reflections during their teaching.” Therefore, they could address the needs of students and the context by changing the order of practice, developing novel approaches, and forming strong value congruence. They became more involved and engaged in connecting the values of their specific setting with their own personal values in order to reach compromise and success. Thus, imaginative and creative ChatGPT-oriented reflection gave novice teachers the courage to shift their attention from surface-level challenges and problems to creative thoughts and practices and to consider themselves as knowledge and theory generators rather than mere consumers.

“As a new teacher, when I could be novel and new; I changed my perspective and performance differently. I used new techniques, taught creatively, changed the order of my teaching, and modified the methods to meet students’ needs.” (NT3)

On the other hand, experienced teachers became more motivated and flexible in changing their rigid beliefs related to teaching and learning in a creative and reflective manner by engaging with ChatGPT. Engaging in imaginative and creative ChatGPT-oriented reflective practice offered them the opportunity to take risks in their pedagogical process and reflect on their experiences systematically and holistically. ET3 stated: “I used the presentation-practice-production method for teaching grammar. However, by reflecting creatively with ChatGPT, I learned to use more task-based language teaching, game-based activities and storytelling, collaborative teaching, project-based learning, and interactive technology during my teaching.” Experienced teachers could creatively change their practices, beliefs, and thoughts. It was acknowledged that although the professional and technical aspects of reflection were prominent, reflection could become more imaginative and creative with the assistance of ChatGPT. Furthermore, ChatGPT-oriented reflection, when expanded to encompass imagination and creativity, could help experienced teachers to “find new roads and journeys of teaching, motivate them to try new ways and take risks, provide a tool for reforming my established beliefs, practices, and thoughts, and make something representational out of abstract and unbelievable notions. (Researcher)” Additionally, experienced teachers became more inquisitive in their experiences as they reflected with ChatGPT, aiming to enhance their understanding and knowledge of teaching a second language. However, some teachers found imaginative and creative ChatGPT-oriented reflection neither systematic nor effective for top-down professional development.

“I teach in a poor facility and crowded class every day, so I need to use my creativity to predict how a certain teaching method will be useful in my classes, what tools I need to seize, and how I can reach the best result out of what I have already done.” (ET2)

Imagination and creativity were found to affect ChatGPT-oriented reflection holistically in various ways. Creativity guided the creation of new ideas that could lead to the prediction of ways to perform those notions in class in a novel way through the help of ChatGPT. The ideas were formed, applications were predicted, and practices were planned for a better learning situation. As mentioned by ET1: “Imagination changed my ChatGPT-oriented reflections creatively, as I realized that I could notice different aspects of my practices that were not noticeable before, adjust my practices contextually, and make new realities purposefully.” This provided new windows of inquiry and investigation to add more novelty to their established reflective practices. In addition, they could add spirit and vitality, notice novel ways, adjust the established frames, balance cognition and emotion, and bridge the gaps of knowledge. Imagination and creativity can have various advantages for teachers’ ChatGPT-oriented reflective practices.

“In my opinion, imagination added life and soul to the nature of my class; what I mean is that imaginative ChatGPT-oriented reflection responded to, planned, and evaluated my practices, students’ learning, and perceived results creatively and emotionally. Hence, teaching became both cognitive and emotive, practical and artistic, and professional and humanistic.” (ET3)

However, novice and experienced EFL teachers faced some challenges as well. Novice teachers paid considerable attention to their own teaching practices, as they wanted to adapt to the context and setting during the initial phases of their teaching. Furthermore, they thought that they should be guided by experienced colleagues, stakeholders, and ChatGPT, rather than focusing on agency and ownership, as mentioned: “I rely on ChatGPT for each and every step I want to take. (NT1)” Conversely, experienced teachers thought that they should stick to their previous teaching approaches and techniques since they had seen the results. Also, sometimes, they were less adaptive and flexible, focusing mainly on firm theories and beliefs. Furthermore, it was believed that novice teachers possess a greater level of creativity. However, acquiring knowledge from these novice teachers proved to be challenging due to the possibility of them feeling embarrassed or losing their confidence.

“I could see my teaching problems and fixed them. However, when I monitored experienced teachers’ reflective practice, I perceived how creative they reflected to enhance students’ learning and achievement. (ET2)”

5. Discussion

Teaching EFL and working with English learners can be challenging and complex for novice and experienced EFL teachers (Yadollahpour & Tajeddin, 2025). In this case, teachers need to learn how to develop greater agency and ownership and take opportunities for gaining knowledge and practice independently and collectively through critical and creative CPD approaches during their teaching career. The purpose of this study was to explore how novice and experienced EFL teachers perceived the role of imaginative and creative ChatGPT-oriented reflective practices in learning from their teaching-related complexities and developing professionally. From the perspective of CT, teaching and teacher development are inherently dynamic and adaptive systems, where learning emerges through interactions, creativity, and reflective practices (Davis & Sumara, 2014; Mason, 2008). The findings of this study align with CT by demonstrating how ChatGPT-oriented reflective practice serves as a tool for teachers to navigate the multidimensional connections and adaptive interactions within their teaching contexts. Teachers who added creativity to their ChatGPT-oriented reflective practice exhibited attributes such as the ability to solve problems innovatively, incorporate novel AI tools, and link theory and practice to achieve innovation. These findings underscore the self-organizing and emergent nature of teacher learning, as highlighted by CT, where small, reflective, and creative changes can lead to significant professional growth over time (Haggis, 2008).

Moreover, ChatGPT-oriented reflection enabled teachers to link new and old meanings, highlighting the relationships between various educational components, such as methods, techniques, and practices, to create personalized teaching approaches. This process reflects the CT principle that complex systems, such as teacher development, are shaped by recursive, reflective, and creative interactions among various elements, including teachers, students, and professional learning activities (Opfer & Pedder, 2011). The transformative and exploratory nature of ChatGPT-oriented reflective practice encouraged teachers to develop greater commitment, motivation, and flexibility, further illustrating how complex systems evolve through feedback loops and adaptive interactions (Cameron & Larsen-Freeman, 2007). The findings also indicated that novice teachers could reflect with ChatGPT or experienced colleagues to obtain professional experiences, generating a personalized teaching method suitable for their specific context. Similarly, experienced teachers innovatively adapted their practices to meet current student needs, demonstrating how complex systems, such as teacher development, are continuously reshaped through reflective and creative practices (Davis & Sumara, 2006). ChatGPT bridged the gap between novice teachers' theoretical and practical knowledge by providing tailored support and guidance, reflecting the CT notion that learning emerges through the integration of diverse elements within a system (Haggis, 2008). Experienced teachers, on the other hand, learned to theorize their practice and apply theoretical insights creatively, leveraging ChatGPT to bring innovation into their classrooms. This aligns with CT's emphasis on the emergent and self-creating nature of complex systems, where teachers recursively and reflectively influence their own professional development (Opfer & Pedder, 2011). Furthermore, the collaborative and imaginative use of ChatGPT fostered a

community of practice, enabling teachers to co-create and recreate knowledge through systematic reflection. This finding resonates with CT's view of teacher learning as a socially and holistically constructed process, where interactions within and between systems lead to the emergence of new patterns of understanding and practice (Cameron & Larsen-Freeman, 2007).

Imaginative and creative ChatGPT-oriented reflection also helped teachers grow personally, socially, and cognitively. Personally, teachers became more motivated, autonomous, and collaborative, reflecting the adaptive and self-organizing nature of complex systems (Mason, 2008). Professionally, experienced teachers integrated creativity into their existing knowledge, generating novel ideas and modifying their frames of reference through ChatGPT. Socially, teachers formed communities of practice that complemented their professional and artistic development, illustrating how complex systems thrive through interconnected and emergent interactions (Davis & Sumara, 2006). In conclusion, this study highlights the transformative potential of imaginative and creative ChatGPT-oriented reflective practice in fostering EFL teachers' professional development. By viewing teacher learning through the lens of CT, the findings demonstrate how reflective and creative practices can help teachers navigate the complexities of their teaching contexts, adapt to changing needs, and emerge as more innovative and effective educators. These insights contribute to the growing body of research on teacher development as a complex, dynamic, and emergent system, offering new directions for integrating AI tools like ChatGPT into reflective practice.

6. Conclusion

This study aimed to explore how imaginative and creative ChatGPT-oriented reflective practices could enable novice and experienced EFL teachers to address the complexities of teaching and develop their continuous professional development (CPD). After examining the practices of six novice and experienced EFL teachers, the findings revealed that ChatGPT-oriented reflections, when supported by imagination and creativity, could offer various personal, professional, and technical benefits for both groups. These benefits included enhanced creativity, the generation of new meanings, the implementation of novel approaches, the adaptation of instructional sequences, increased motivation and adaptability, the ability to embrace uncertainty, and the transformation of pedagogical practices and beliefs. To support and expand this line of research, future studies could employ quantitative methods and experimental designs to investigate different mediating variables and aspects numerically. Additionally, teachers in other disciplines could be studied through the lens of imaginative and creative ChatGPT-oriented reflection to explore how they develop professionally in their specific fields and contexts. Collaborative, team-based teaching contexts also offer valuable opportunities for further inquiry. This study informs pre-service and in-service teachers, teacher educators, and stakeholders of the potential of imaginative and creative ChatGPT-oriented reflection to enhance and reform their pedagogical practices, beliefs, and

theoretical frameworks. It also presents a systematic tool to help organize and enrich teaching and learning processes within a complex educational system.

This study, however, had several limitations that future research could address. First, the sample size was limited to six language teachers. Future studies should examine this topic in more depth through broader, nationwide investigations involving a larger and more diverse sample of teachers across both public and private educational sectors. Furthermore, the present study employed classroom observations, post-class discussions, and semi-structured interviews to investigate teachers' practices. Future research could integrate additional methodological tools to provide a more comprehensive and transparent understanding of teachers' imaginative and creative ChatGPT-oriented reflective practices.

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