



# Pre-service EFL teachers' identity construction in relation to digital gamification: A social theory of learning perspective



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Nowadays, digital technology is a vital aspect of teaching. Therefore, it is essential for pre-service teachers of English as a foreign language (EFL) to develop an identity that fits the current needs. In response to this demand, this study aims to explore pre-service EFL teachers' identities in relation to digital technology, particularly gamification. This study employs Wenger's social theory of learning, especially the Engagement, Imagination, and Alignment modes of belonging. This study involved four pre-service EFL teachers from two different contexts in Indonesia. Data on participants' involvement in digital gamification were collected from the written history records of the participants and semi-structured interviews. Data collection during seven weeks of the participants' teaching practice were analyzed to grasp how digital gamification influenced the development of their identities as pre-service EFL teachers. The findings

indicate that the participants encountered identity struggles in using digital gamification to negotiate their identities while accomplishing teaching practice in placement schools. Likewise, they claim to have developed a number of identities such as contemporary, tech-savvy, innovative, and up-to-date pre-service EFL teachers. The results of this study assert that initial teacher education would benefit from focusing on the identities of pre-service EFL teachers. This implies that pre-service EFL teachers need to continually maintain their ever-changing digital identities and that schools need to provide pre-service EFL teachers with additional technological resources.

**Keywords:** digital gamification, pre-service EFL teachers, teacher identity, social theory of learning

## Introduction

A considerable amount of research on teacher education in English as a Foreign Language (EFL) classes converges on the importance of pre-service teachers' experiences and teaching strategies in micro-teaching settings and school-based teaching practice to develop their professional skills (Elias, 2018; Petriani et al., 2021; Flórez & Basto, 2017; Muluk et al., 2020; Otsupius, 2014; Rahayu & Siregar, 2018; Sata & Erna, 2020). Within EFL classrooms, a job as a teacher can cause one to experience a number of distinct emotions, including frustration, disappointment, and anxiety, if pre-service teachers are put in terrible situations, like when students do not try hard to grasp a lesson, or act up, or challenge their teaching skills in class (Sutton et al., 2009). As a response, EFL pre-service teachers need to define their identity (Siahaan & Subekti, 2021) since this influences educational quality, teacher preferences (Olsen, 2016) and teacher behavior management (Dugas, 2016); informs a teacher's judgments on instruction, materials and students interactions (Beijaard et al., 2004); and mediates a teacher's activities (Chong et al., 2011).

Pre-service teachers may experience an identity shift during their education as they change from being students to teachers and go through changes in behavior and perception of themselves (Gawronski & Bell, 2018). The topic of pre-service teachers' identity formation in ELT practice has been intensively explored (Apriliani, 2020; Ivanova & Skara-Mincāne, 2016; Kabilan, 2013; Maharani et al., 2022; Salinas & Ayala, 2018; Taşdemir & Seferoglu, 2022; Ulum, 2020). Traditionally, the preconceptions of pre-service teachers are rooted in their prior experiences as students in formal learning contexts, and they carry their projected identity of the ideal teachers they wish to perform in teaching in the schools (Gawronski & Bell, 2018; Maharani et al., 2022). Nevertheless, the integrated nature of digital technology in modern life necessitates a reexamination of what teacher educators have regarded as influential learning sources in the lives of pre-service teachers. This new paradigm opens the door to investigating how digital technologies mediate the identity formation of pre-service teachers (Gawronski & Bell, 2018).

There have been appeals to better understand teacher identities in light of

technology advancements as the primary cause of educational reform (Hadfield, 2016; Nunan, 2016). In addition, the use of technology in the classroom alters instructional dynamics, which in turn influences teachers' practices and traits (Can & Karacan, 2021; Tondeur et al., 2017). Consequently, the concept of digital identity can have a tremendous impact on a teacher's pedagogical methods and their ability to connect with and engage students (Nykivist & Mukherjee, 2016). In a limited number, empirical research has considered the interplay of Information and Communication Technology (ICT) on teacher identity from the vantage points of in-service and pre-service teachers (Can & Karacan, 2021; Gawronski & Bell, 2018; Kwihangana, 2020; Nykivist & Mukherjee, 2016; Yazici & Atay, 2023). Despite the fact that there is a significant interplay between ICT and teacher identity, to our knowledge, no prior studies have ever examined pre-service EFL teachers' identity development in relation to digital gamification which is gaining more attention as technology advances because of its easy implementation on portable mobile devices and widely utilized in the digital environment even in higher education (Panis et al., 2020; Su et al., 2021).

While several studies show promising outcomes from incorporating digital gamification into ELT in terms of skill-based learning such as reading (Abusa'aleek & Baniabdelrahman, 2020; Chen et al., 2020; Kuswandi & Fadhli, 2022), writing (El Tantawi et al., 2018), grammar (Fernández-Portero & Castillo-Rodríguez, 2022; Redjeki & Muhajir, 2021), vocabulary (Al-Eqabi & Alnoori, 2021; Fithriani, 2021; Panmei & Waluyo, 2022; Waluyo & Bucol, 2021), and students' engagement (Afrilyasanti & Cahyono, 2022; Inayati & Waloyo, 2022; Khaleel & Sahari, 2016; Pradana et al., 2023), others have found adverse consequences resulting from this practice (Zhang & Hasim, 2023). Given the debatable findings of this issue, this present study tackles this research gap by exploring how pre-service EFL teachers build their identities while using digital gamification which is opposite to in-service teachers' hesitance to implement in their classrooms due to a lack of expertise (Zhu, 2022), across a seven-week teaching practice as a milestone in understanding how their identities are formed (Taşdemir & Seferoglu, 2022) within their community of practice in Indonesian context applying a theoretical framework of teacher identity namely Wenger's social theory of learning (1998). The present study explores how participants build their knowledge of digital gamification and apply it to their own contexts (schools which have technological resources and those which have fewer technological resources) and how this digitalization process shapes their pre-teacher identities. To achieve the goals, the research question is presented as follows:

How do pre-service EFL teachers shape their identity in relation to digital gamification in schools with technological resources and fewer technological resources during seven weeks of teaching practice?

### *Teacher identity*

Pre-service teacher education has recently been framed as crucial to the formation of a teacher's identity (Olsen, 2008). This is because the formation of a teacher's identity is a lifelong project (Mockler, 2011) that necessitates constant negotiation as a teacher in relation to both internal and external factors (Beauchamp & Thomas, 2009). In recognition of the longevity of this process, Antonek et al. (1997) use the phrase "emerging teacher identity" to denote the initial stages of the process of identity development. Several studies have demonstrated that pre-service teachers can develop their identities and self-understanding as teachers by participating in an authentic classroom community (Gawronski & Bell, 2018; Lave & Wenger, 1991). This enables them to join the group and contribute to its identity through their participation in social relationships (Lave & Wenger, 1991). It can be recognized that establishing identity is a tough challenge that depends on the theoretical lens through which it is regarded (Beauchamp & Thomas, 2009; Richardson & Watt, 2018). Keeping in mind that there is no single definitive definition of identity, Pennington (2015) defines it as a collection of qualities that are uniquely connected with a specific individual.

Although being a teacher demands keeping up with changes and advancements in the field, it is advised that a successful teacher in the 21st century is also able to adapt to new technology in teaching techniques (Abbott, 2016; Ertmer & Ottenbreit-Leftwich, 2010), regardless of external and internal barriers (Ertmer, 1999; Valentyn, 2019). Trent and Shroff (2013) reveal that ICT-using teachers feel more up-to-date. This transformation occurs when teachers push their limits and leave their comfort zones by employing novel approaches to instruction, such as ICT integration (Pennington, 2015; Yazici & Atay, 2023). Educators' usage of technology-supported pedagogical practices to their identities as teachers highlight the necessity to analyze beliefs about technologies including digital gamification, through the analytic lens of identity (Johannesen & Habib, 2010).

### *Gamification in the EFL classroom*

Significant shifts in how students learn and interact with material have occurred as a result of the disruptive era. Educators, however, have new problems in this digital age of learning as they must adapt to reach a generation of modern students that thrive on constant stimulation. Gamification can effectively overcome these obstacles and create a more enjoyable, stimulating learning environment that is engaging, interactive, and motivating for students than using social media (Flores, 2015; Jesmin & Ley, 2020; Luo, 2022; Luthfiyyah et al., 2021; Sheldon, 2016). The incorporating gaming elements into educational settings has garnered increasing interest from academics and educational practitioners (Ahmed et al., 2022; Mee Mee et al., 2020; Noroozi et al., 2020). Gamification is the process of applying game mechanics, such as points, badges,

and leaderboards, to non-game settings in order to inspire and engage students in those settings (Fernández-Portero & Castillo-Rodríguez, 2022).

In the realm of ELT, gamification has emerged as a viable way to improve students' learning outcomes such as vocabulary acquisition, grammar competency, and speaking abilities, as well as to create an environment for more dynamic and immersive learning (Dichev & Dicheva, 2017; Smiderle et al., 2020). A significant number of empirical research come to the conclusion that gamified learning holds great potential in terms of its efficiency in educational settings (Dicheva et al., 2015; Hamari, 2017; Kim & Lee, 2015; Thom et al., 2012). Thom's et al. (2012) work reveals that the points system inside gamification for learning, including points and badges as part of three distinct notions (Man, 2021; Werbach & Hunter, 2012), yields a positive impact on user activity. Regarding the effectiveness of educational gamification, Kim and Lee (2015) claim that gamification increases rapidly and exceeds the educational effectiveness of traditional learning due to hindrances, such as adaptation time.

Despite its potential in ELT, there are also obstacles and limitations associated with gamification. A number of academics express worries regarding the potential for gamification to divert attention away from the real learning goals of a course or to establish an atmosphere that is competitive and stressful for students to study (Hanus & Fox, 2015). Haaranen et al. (2014) discover that a certain user experiences negative feelings in relation to the badges. Moreover, Chen et al. (2015) claim the failure could be due to technical and logistical implementation challenges. From the pre-service EFL teachers' perspective, incorporating gamification into the classroom setting necessitates thorough planning and design to guarantee that it is effective and in line with the course material objectives.

### *Social theory of learning*

In order to get a useful understanding of pre-service EFL teachers' identity development in relation to their digital gamification adaptation, this study discusses teacher identity within the framework of Wenger's (1998) social theory of learning. The social theory of learning conceptualizes identity as a process of becoming a certain person and as something that is shaped by its social context, mostly through negotiation and involvement in the context of a school-based teaching practice. Since our study focuses primarily on how pre-service EFL teachers form their identities in relation to digital gamification within the context of a school-based teaching practice, we adopted the definition of teacher identity as proposed by the social theory of learning.

Three modes of belonging in the social theory of learning are highlighted: engagement, imagination, and alignment (Wenger, 1998). Engagement occurs when individuals build and maintain joint ventures and negotiate meanings through real-world experience, allowing us to invest in what we do and in our relationships with others, giving us a better idea of who we are. Imagination is the process of extrapolating beyond our own experience to create images of the world and our role within it across time and space. Because it is a creative



process that extends beyond direct contact, it does not include fantasies. It is a creative process that goes beyond direct engagement making a big difference in how we feel about ourselves and how much we can learn from the things we do. This theory is chosen for this study since it corresponds to the participants' setting as pre-service EFL teachers who still need to construct and reconstruct their emerging identity in becoming teachers. Alignment is the process of harmonizing one's actions with those of larger structures and enterprises; it is also connected to the process of incorporating the group's identity into one's own. As the name implies, people are actually being brought into line with community demands and expectations.

## Method

As stated in the introduction, the purpose of this study was to apply Wenger's theory of social learning to the process of determining the identities of pre-service EFL teachers throughout their teaching practice. To accomplish this goal, the researchers collected extensive information about the teaching experiences of pre-service EFL teachers. This study, then, is an indication of a qualitative study. It tries to comprehend and explain human and social behavior as it is lived by individuals in a particular social situation as stated by Ary et al. (2010). Hence, qualitative research must adopt both a naturalistic and an interpretive stance to properly explore reality's complexities, such as identity formation as an infinite process (Denzin & Lincoln, 2008; Norton & McKinney, 2010). In order to gain a deeper understanding of the identity formation of pre-service EFL teachers in relation to digital gamification use, this study adopted a multiple-case study approach (Creswell, 2013). Although the results cannot be generalized to the population due to the small number of participants, this method is effective for exploring the phenomenon in its own context (Baxter & Jack, 2015), because teacher identity construction may vary according to the context and personal experiences that are intended to help us gain a better understanding of the topic.

### *Context and participants*

This study included four pre-service EFL teachers, one male and three females. They were enrolled in Internship 3 for a school-based teaching practice course for an undergraduate degree at a public institution in East Java, Indonesia. At the time of the study, each participant was between the ages of 22 and 23 and was in the third year of a four-year bachelor's degree program in English language education. One component of this curriculum is a teaching practice, in which student teachers spend up to seven weeks in a local Indonesian school developing and demonstrating their competence and preparedness to enter the teaching profession. Following a selective sample technique, those four participants were recruited to participate in this study because they were able and eager to share their experiences in designing and implementing such digital gamification in their teaching practice. Nonetheless, participants had the



autonomy (Ramrathan et al., 2017) to choose whether or not to participate in the study via an informed consent form issued before the interviews. The study also followed the anonymity principle by changing the participants' true identities into pseudonyms throughout the report and scheduling interviews based on their availability (Gray, 2014).

The need for maximal diversity in specific participant attributes motivated a different sampling technique (Merriam, 2009). Participants in the study were, for instance, recruited from both junior and senior high schools for teaching practice placement. Moreover, we looked for pre-service EFL teachers who were working in a range of schools in Indonesia, from those with fewer technical resources to those with more technical resources during their teaching practice. As Duff (2008) suggests, this helps us to know what their roles are in the research process. Even though the first writer was a faculty supervisor for some pre-service teachers who were using digital gamification platforms for the first time during their teaching practice, none of the four participants in this study was under her supervision. This relationship would give us a deeper understanding of the situation and keep us from getting too close to the participants. The participants' details are shown in Table 1.

**Table 1.** A profile of case study participants

Pseudonyms	Age	Placement school for teaching practice	School's technological resources
Nurul	22	Senior high school with technological resources	Mobile phones for students, Wi-Fi, a liquid crystal display (LCD) projector
Zaskia	23	Junior high school with technological resources	Mobile phones for students, Wi-Fi, an LCD projector, and a smart TV
Azzam	22	Senior high school with fewer technological resources	Mobile phones for students with a requirement, no Wi-Fi, no LCD projector, and no smart TV
Bilqis	22	Senior high school with fewer technological resources	No mobile phones for students, no Wi-Fi, no LCD projector, a smart TV

### *Data collection and analysis*

At the initial phase of the study, all participants were told about the study's purpose. Written history documents and semi-structured interviews were used to gather the data at the beginning of the even semester of 2023. Five questions adapted from Yazici and Atay (2023), dealing with experiences and techniques for using digital gamification in their teaching contexts, were asked to the participants. Hence, written history documents served as a foundation for us to develop follow-up semi-structured interview questions to probe deeper into their experiences with digital gamification deployment. Then, each of the participants took part in two interviews that were only partly planned. An interview was conducted through a WhatsApp group during the participants' second week of their seven-week teaching practice. The first interview (Interview 1) focused on their placement school for teaching practice, the technological

resources of the school, the types of digital gamification platforms used in the school, and how the students responded in the classroom. Soon after the pre-service EFL teachers finished their teaching practice and started going back to college, a second round of interviews (Interview 2) was done. Before they were interviewed, they were given an option either to speak their first language, Indonesian, or English. They all opted to converse in Indonesian. The interviews were done in person and took between 30 and 35 minutes each. The interviews were audio-recorded, and we took notes as the interviews went on the spot.

During the interview, the participants were required to talk about their experiences in using digital gamification, including the perceived benefits, the challenges and potential solutions, whether they believed that using digital gamification had influenced their teaching and learning experiences, and whether they intended to keep using and developing their digital gamification after the teaching practice was over. Discussions were encouraged to be open-ended and, when finished talking, they were asked if they had anything else to say. The interviews which were conducted in their native language were then translated into English. In summary, a variety of techniques were employed to ensure the validity and applicability of the research findings, such as collecting data at various points during the teaching practice, involving participants who were completing their practice in a variety of schools, and offering in-depth descriptions of the experiences that the pre-service EFL teachers had when constructing their identities using digital gamification (Merriam, 2009).

To analyze the data, the verbatim transcription of semi-structured interviews and written history were captured into a Word document, and then the data was refined by a purposive selection, which implies selecting information-rich events whose study can enlighten the research topics (Patton, 1990). Then, themes were determined through the process of deductive analysis in accordance with the three primary categories proposed by Wenger (1998). These categories are Engagement, Imagination, and Alignment. The participants' individual reflections were presented one by one, accompanied by an in-depth description of each situation. Thus, trustworthiness of the research was improved through the use of member checking, which was carried out. To verify that the excerpts accurately reflected the participants' thoughts, we had them read back their comments after they had been used in the study.

## Findings

The results of the study are divided into two categories based on the context of the placement schools where pre-service EFL teachers participated in teaching practice. It consists of the schools with technological resources and those with fewer. Below is a summary of the kinds of digital gamification exploited by participants during their school-based teaching practice.



**Table 2.** A brief description of the kinds of digital gamification implemented by the participants

Kinds of digital gamification	Description	Participants
Mentimeter <a href="https://www.mentimeter.com/">https://www.mentimeter.com/</a>	Mentimeter is a valuable digital presentation tool that enables teachers to effectively use its various features for instructional purposes, such as quizzes, polls, spin the wheel, word clouds, and many more.	Nurul and Azzam
Wordwall <a href="https://wordwall.net/">https://wordwall.net/</a>	Wordwall is an internet-based platform that facilitates the creation of a diverse range of interactive and captivating classroom exercises for students, whether they are physically present or participating online. This platform offers a wide selection of templates, including but not limited to multiple choice, matching pairs, anagram, sorting out, and cloze questions.	Nurul and Bilqis
Puzzlemaker <a href="https://puzzlemaker.discoveryeducation.com/">https://puzzlemaker.discoveryeducation.com/</a>	Puzzlemaker is an online tool for generating customized word searches, crosswords, math puzzles, double puzzles, fallen phrases, mazes, letter tiles, cryptograms, number blocks, and concealed message puzzles. It provides teachers, students, and parents with a free Web-based tool for engaging students with various learning styles and incorporating multiple useful skills, such as vocabulary, reasoning, spelling, making inferences, evaluating alternatives, and drawing conclusions.	Zaskia
Nearpod <a href="https://nearpod.com/">https://nearpod.com/</a>	Nearpod is a website and app-based digital tool that allows students to engage with and learn through interactive slide-based instructional resources. Because it is designed to integrate well with many pre-existing resources, such as Google Slides, Microsoft PowerPoint, and YouTube, it may also leverage gamification to make learning more interesting and entertaining.	Bilqis

### *Schools with technological resources*

**Nurul's reflection.** Since joining the micro-teaching course, Nurul has come to believe strongly in the value of ICT integration. She started contemplating how to teach English to millennial students in a way that would catch their attention. One idea was to utilize educational technology. She declared in her written history document, "Adapting to the new era by becoming a tech-savvy, innovative English teacher is one way to stave off student ennui in today's classrooms".

Nurul taught English to 11th graders at a public senior high school as her third- internship program. She achieved this through utilizing Mentimeter and Wordwall as digital gamification to render learning English fun. She related:

Students are permitted to bring cell phones to the school where I completed my teaching practice, and the Wi-Fi is accessible to us as well. Additionally, LCD projectors can be found in nearly all classrooms. I consider myself fortunate to attend this institution, so I have made the most of its resources by serving as a role model and integrating Mentimeter and Wordwall into my English teaching (Interview 1).

Nurul's participation in the process of identity construction was facilitated by the peer-to-peer interaction she experienced during micro-teaching. Every student in this course was expected to do independent teaching practice using digital platforms. Among them were Quizalize, Zoho Forms, Quiz Whizzer, Socrative, Wordwall, Kahoot, and Mentimeter.. During the teaching simulation, they took turns playing the roles of English teachers and students in grades 9 through 12. Nurul benefited from this by studying, experimenting, and deciding which digital gamification she would utilize for her school-based teaching practice. She stated in her written history document, "Engaging in and applying diverse digital platforms during the micro-teaching course proved to be extraordinarily beneficial for my classroom-based teaching". Furthermore, in the interview, she accounted for:

Interacting with my peers in micro-teaching class last semester gave me an idea and a path for incorporating digital gamification into English teaching practice. As a reference, I learned and practiced using numerous digital platforms before settling on Mentimeter and Wordwall for my school-based teaching practice (Interview 2).

In addition to her direct interaction with her peers, Nurul's imagination plays a significant role in the formation of her teacher identity. Before her school-based teaching practice, she had been overly concerned and apprehensive about teaching English effectively while incorporating technology. However, once completed, using Mentimeter and Wordwall assisted her as an EFL pre-service teacher in capturing her students' attention in order to have a pleasurable English learning experience. During the interview, she stated:

I taught English on numerous occasions during my seven-week teaching practice. There were two separate sessions in which I chose not to use any form of digital gamification. I could sense the difference. I've come to a conclusion that Mentimeter and Wordwall could promote beneficial interaction with my students, particularly when ranking the outcomes of the students' interactive exercises according to the shortest time they obtained. Additionally, randomization of questions in the menus of Wordwall works to prevent students from cheating (Interview 2).

Last but not least, alignment with the practice supervisor's support and the students' addiction to digital gamification integration in ELT, as revealed by a preliminary survey at the end of the meeting, has enabled Nurul to change the direction of her teacher identity. She affirms that she served as a facilitator between her students and the English topic being discussed in class when

Mentimeter and Wordwall were implemented. Thus, Nurul equates being an up-to-date EFL teacher with increased instructional effectiveness. She illustrates how the idea of teacher identity is liable to shift throughout time. For her, being updated with topic knowledge and ICT skills is essential, and falling behind also correlates to being insufficient. In the written history document, she wrote, “I asked my English class students what they thought about digital gaming by giving them a poll”. Additionally, she stated in the interview:

After completing my third internship program in a school-based setting, I wish to keep studying how to teach English more effectively by staying abreast of technological advancements. Furthermore, with the availability of ChatGPT as an open AI, EFL teachers must also grasp it in order to anticipate our students’ misuse of it (Interview 2).

**Zaskia’s reflection.** Zaskia completed her third internship program by having a seven-week teaching practice in a public senior high school requiring its pre-service EFL teachers to instruct students in the 12th grade. Hence, she taught students in 11th and 12th grades. Her educational environment is conducive to the development of ICT-based teaching practice. In her written history document, she stated, “I consider myself fortunate to have this school for my teaching practice due to its technological resources”. During the interview, she mentioned:

Students at the school where I completed my teaching practice for Internship 3 are permitted to bring their mobile phones to school to assist with English study. They are also permitted to access the school’s Wi-Fi. Every classroom has an LCD projector or a smart TV (Interview 1).

To enhance her English teaching effectiveness, Zaskia used the Puzzlemaker platform as a type of digital gamification for topic-related brainstorming. She selected Puzzlemaker over other platforms to accommodate the slow-loading Wi-Fi of the school. Occasionally, she used her mobile bandwidth to deal with this. Zaskia’s engagement in the construction of her identity consisted of utilizing the same platform she had used in the micro-teaching course, Puzzlemaker, because it was more applicable than the others. As she explained in the written history document, “I explored other digital platforms before opting to use Puzzlemaker, but they did not function properly”. Further, she affirmed it during the interview:

I attempted to use another platform in addition to Puzzlemaker. Nevertheless, connecting to the internet and displaying via an LCD projector took a lengthy time. As a result, I opted to merely employ Puzzlemaker. This digital gamification was excellent as a brainstorming tool to start my English class after the break time to keep my students focused on the topic (Interview 2).

Along with her engagement, Zaskia’s imagination plays a significant part in creating her teacher identity. In line with Wenger’s (1998) contention that imagination is a way to make new pictures of the world and of ourselves, Zaskia attempted to formulate her teacher identity by striving to get well-prepared

prior to teaching practice in the classroom. Her remarks help us to understand this better:

I focused on teaching preparation during a teaching simulation in a micro-teaching class. It was not tough, but it was really different from my thinking throughout my school-based teaching practice. I needed a lot of energy to be ready for teaching practice. Utilizing Puzzlemaker helped me a lot to get my students involved in their English studies. I couldn't imagine how monotonous the 90 minutes (two sessions) would be if I had not planned for educational digital gamification to complement my teaching performance (Interview 2).

Alignment, the final form of identification in this study, primarily occurred in Zaskia's context when aligning with the teaching practice supervisor's support and the students' favorable response to digital gamification that has not yet been incorporated in their English classes. As she put it in her written history document, "During the initial meetings of my school-based teaching practicum, I experienced significant concern regarding the potential lack of acceptance from the students. By utilizing digital gamification, I was able to alleviate this concern". She elaborated on the topic at hand during the interview:

The majority of my students competed to engage in Puzzlemaker as educational digital gamification during English teaching and learning. This could help me establish a solid rapport with my students. As a result, I intend to acquire various forms of digital gamification to utilize as an EFL teacher in the future (Interview 2).

### *Schools with fewer technological resources*

**Azzam's reflection.** Azzam completed his teaching practice for Internship 3 in a public junior high school. Grade 7A was under his tutelage. Although he is enthusiastic about developing an ICT-based teaching practice, his school context may not be feasible for it. As he put it in his written history document, "There are procedural steps involved in obtaining approval for students to utilize their mobile phones for English learning purposes". He elaborated on it further during the interview:

My school expressly prohibits students from bringing cell phones to school. To address this issue, I attempted to negotiate with the classroom teacher so that my seventh-grade students might bring their mobile phones to class for the purpose of learning English through digital gamification. The classroom teacher submitted the request to the vice principal and then the principal to obtain permission. Furthermore, this institution does not offer Wi-Fi to the students and pre-service teachers (Interview 1).

These concerns were problematic for both the pre-service teachers and the students in Azzam's class. Due to the lack of an internet connection resource, students had to purchase their own bandwidth. Azzam was pleased to share



his own bandwidth with his students via his cellphone so that they would not have to spend as much on purchasing bandwidth. He elaborated:

I was aware that the school did not offer Wi-Fi. It prompted me to anticipate having ample bandwidth to distribute if my students needed it to learn English in class. I had no trouble with it (Interview 1).

To incorporate digital gamification into his teaching practice, he used an online discussion through WhatsApp and an offline one with his peers, who were doing teaching practice in other schools, as a mode of belonging to the community. However, his teacher identity mainly forms as a result of his personal strategy by self-exploring Mentimeter. He stated in his written history document, “Mentimeter discussions with peers are beneficial”. In the interview, he voiced that:

Before deciding to use Mentimeter for digital gamification, I discussed it with my friends first. I used Mentimeter in my English lesson to convey material in a fun way using its Image menu, relying on its ease of use. Furthermore, I expanded its menu to include Spin the Wheel to choose the students’ turn and types of expression, as well as Multiple Choice for an interactive exercise. Since it was their first time using Mentimeter, my students were very excited for them (Interview 2).

Azzam’s expectations about the school’s technology resources to adopt digital gamification, particularly with regards to an LCD projector, underwent a significant shift as he moved from the imagining mode to the reality mode of pre-service teacher identity construction. Azzam’s quest to redefine himself as a teacher involves obtaining an LCD projector from a Prodamas program in his hometown and bringing it to the school as part of his commitment to providing a modern, technological setting in which students may study English. He took into account:

I completed internships two and three at the same school. On my second internship, I had observed that the 7A classroom was equipped with an LCD projector. Since the 7A classroom was being refurbished, class activities were relocated to a computer lab without an LCD projector. Thus, I volunteered to bring my own LCD projector to school. In addition to supporting digital gamification, the LCD projector was used to promote one of the online class subjects in the seventh-grade curriculum. Without an LCD projector, I would not have been able to present and practice for this topic (Interview 2).

Finally, Azzam appears to have figured out who he is as a teacher as a result of alignment with students’ demands about incorporating digital gamification and support from his teaching practice supervisor at school. The EFL in-service teacher at this school has not yet employed digital gamification to get the students involved in a more fun way, and Azzam was the first EFL pre-service teacher to do so. He addressed the matter by stating in his written history document, “My teaching practice supervisor at school commended my utilization of



Mentimeter”. Moreover, in the interview, he focused on the students’ responses to Mentimeter.



Even though the students were perplexed about how to use Mentimeter because it was their first experience with digital gamification, I was able to handle it. Their favorable response and advancement inspired me to implement it again when I become an EFL in-service teacher. I maintain that connecting students to ICT, particularly educational digital gamification, is a must in the millennial age (Interview 2).

The aforementioned quote reveals that Azzam is aware of the educational transition. As an English teacher, he also has to keep up with how technology changes. He argues that interactive English language learning may be made easier by adopting a contemporary teacher identity and using digital gamification.

**Bilqis’ reflection.** Bilqis completed her Internship 3 by achieving a seven-week teaching practice at a private junior high school. She taught 7E and 7F grade students. She has been avidly employing digital gamification since she performed teaching simulations in a micro-teaching class, as evidenced by her lecturer’s approval. She rates her proficiency with digital tools as high. Unfortunately, she ran across several issues when trying to implement digital gamification in her English lessons at school, as shown below:

I was unable to make as much use of ICT resources as I anticipated. Since most of my students were exhausted from their activities as a result of their boarding school curriculum, the vast majority of my students lacked interest in ICT. Hence, they didn’t have any other plan than to change the subject. Even worse, their English teacher didn’t do anything to get them excited about learning (Interview 1).

After encountering these obstacles, Bilqis first developed a negative impression of her teacher persona. Even though her student profile was not enthusiastic about digital tools, Bilqis was persistent in her efforts to change their attitudes toward digitalization by insisting on creating an interactive and technologically enhanced English classroom environment through interactive games using digital gamification platforms. In her written history document, she expressed her determination to act as the catalyst for transforming this condition. The following excerpt better shows the point:

In my classroom, there is a smart TV with an internet connection. Regrettably, it has never been used to help students learn English. Earlier, the English teacher only used it to watch irrelevant English programs on YouTube, such as the “Lato-Lato” competition. I worked hard to break this behavior by introducing them to digital gamification via smart TV in order to promote successful English learning (Interview 1).

Bilqis’s teacher identity has been shaped by her engagement with digital tools such as Wordwall and Nearpod. This technological involvement served as a



cover for her personal technique for struggling in her teaching practice context. She took advantage of the situation by utilizing technology-mediated activities. From her perspective, she described the situation:

During Internship 3, I was in charge of two seventh-grade classes. Almost all of my students were unmotivated to learn English because they were exhausted of participating in the many activities of the boarding school program. To deal with this issue, I attempted to employ Nearpod as an interactive digital gamification, but it failed. At another session, I used a different site called Wordwall. According to my students, it was more intriguing than Nearpod. Since then, they have gradually grown fascinated and engaged in joining in interactive English gamification (Interview 2).

Bilqis is thrilled after using Wordwall because the students' English scores have improved. Even though students are not permitted to carry mobile phones to school or boarding school, using a smart TV to practice digital English gamification is a highly effective ICT device for learning English. In the interview, she stated:

I used three Wordwall menus: Random Wheel, Gameshow quiz, and Find the match practiced through the smart TV in the classroom. They could work well for my students. Their English scores progressed positively. It is worth having Wordwall (Interview 2).

The second mode of belonging described by Wenger (1998) is imagination as the construction of representations of the self and the environment that transcend engagement. Bilqis appeared to employ digital gamification to extend her teaching practice beyond the present moment. She seemed to acknowledge the importance of Wordwall in the development of her identity as a teacher while reflecting on its use. In addition, she utilized Wordwall to extrapolate from her own engagement in order to propose a solution to the classroom difficulties. She imagined that her students would not only engage in digital gamification but also be capable of designing their own digital gamification using various menus in Wordwall.

Self-exploration has led me to use numerous digital applications prior to and during micro-teaching class. I view myself to be a tech-savvy English pre-service teacher. By integrating digital gamification actively, I want my students to be able to create by themselves. Via Wordwall, for example, the students can construct an interactive digital gamification by leveraging its fun menus (Interview 2).

Bilqis's alignment, as the final mode of identification in the current study, primarily occurred as she conformed to the students' expectations. Despite the fact that her teaching practice supervisor did not offer any assistance with incorporating ICT into the English classes, she has used digital gamification for teaching practice not only during Internship 3 or school-based teaching practice but also Teaching English to Young Learners course and micro-teaching course previously to become satisfied with her status as an English teacher. In



her written history record, she claimed that “there are numerous good digital platforms for today’s students’ English learning, one of which is Wordwall”. In addition, she said:

The use of Wordwall as a digital gamification inspired my students to better prepare for formative tests. When I hear that my students have grasped the concepts I’ve been teaching them in English, I feel accomplished (Interview 2).

## Discussion

The purpose of the present study was to apply Wenger’s (1998) theory of social learning to recognize the identities of pre-service EFL teachers during their teaching practice. The participants were four English teachers (i.e., Nurul, Zaskia, Azzam, and Bilqis) who completed their seven-week school-based teaching practice at different schools. The findings of the study emphasize the value of participation in educational settings where participants are exposed to first-hand experiences that shape the development of their identities. Wenger (1998) contends that identity development occurs as people partake in socially significant activities regarded favorably by particular communities. In the context of this study, self-exploration of various digital gamification platforms and collaboration with peers were used to engage the pre-service EFL teachers. The use of Puzzlemaker by Zaskia, Mentimeter by Azzam and Nurul, and Wordwall by Bilqis and Nurul, through their various menus, helped them develop teachers’ identity as contemporary, tech-savvy, innovative, and up-to-date pre-service EFL teachers.

Given that identity is an experience and a demonstration of competence (Wenger, 1998), participating in the digital gamification provides one way to validate the identities of the participants. In this regard, when the ICT proficiency of Nurul, Zaskia, Azzam and Bilqis is acknowledged and respected by their students, it greatly aids their emergence of a modern, tech-savvy, innovative, and up-to-date teacher identity as previously stated. Similar studies emphasize the contribution of ICT to the construction of a modern teacher identity (Can & Karacan, 2021; Trent & Shroff, 2013; Valentyn, 2019; Yazici & Atay, 2023). All of these studies indicate that the use of new digital technologies has altered teachers’ beliefs of what it means to be a modern teacher, resulting in better teaching outcomes for both students and teachers. Regarding a school-based teaching practice supervisor, this study offers an intriguing viewpoint. While Bilqis, one of the pre-service EFL teachers in this study, did not receive assistance from her supervisor, she was nonetheless able to cultivate a positive teacher identity through her knowledge of digital gamification, much as Nurul, Zaskia, and Azzam did. This finding contradicts the findings of Ulum’s (2020) study, which concluded that those with an unsupportive teaching practice supervisor developed a negative teacher identity.

Identification through engagement both occurs as a result of an individual’s investment in digital gamification and relationships with others, which in this



context are the peers. In this case, the contribution of digital gamification to identity construction included providing Nurul, Zaskia, Azzam, and Bilqis with a single means of conducting interactive exercises, stimulating fun brainstorming, and building a good rapport with students at schools. In addition, creating an enjoyable English learning environment, capturing students' attention in the classroom to focus on the topic, assisting students in better preparing for summative tests, and preventing students from cheating are the benefits of digital gamification implemented by Nurul, Zaskia, Azzam, and Bilqis. Relating to imagination as Wenger's (1998) second mode of belonging, they emerged to apply digital gamification as a way to reach beyond their direct engagement of their teaching practice. In reflecting on their use of digital gamification, they recognized its role in the transformation of their identity as EFL pre-service teachers, describing change, improvement, and development in which digital gamification played a role, as stated in the interview 1 and 2.

That is to say, when they used digital gamification to reflect on the experiences of using them, they were able to see their own particular challenges in the classroom. The point at which they were able to come up with solutions to these obstacles was pivotal in their development as teachers. Ertmer's (1999) classification indicates that the first order barrier for the pre-service EFL teachers in this study is the lack of school-based technical resources. It seems that each participant's sense of who they are as a teacher is shaped by how they deal with these digital obstacles and the schools' circumstances in which they accomplished teaching practice. Furthermore, the findings of this study related to alignment, as Wenger's (1998) final mode of belonging, corroborate Trent and Shroff (2013) whose study asserts the participants' enthusiasm for the usage of digital gamification. It was based on their belief playing a significant role in their becoming EFL teachers supported by their positive experiences with digital gamification. As a result, there is a significant link between teachers' beliefs, technology-supported pedagogical practices in the classroom connecting and engaging with today's students, and identity (Johannesen & Habib, 2010; Nykvist & Mukherjee, 2016).

The present study was conducted to qualitatively better comprehend pre-service EFL teachers' identity development as a result of digital gamification use. Since creating a creative learning environment is a challenging endeavor in the twenty-first century, the findings of this study demonstrate that the introduction of gamification in a classroom by pre-service EFL teachers generated immediate enthusiasm and curiosity among students, which in turn increases their motivation to learn English as Mee et al. (2020) argue. The students' enthusiasm and interest in digital gamification result from their initial exposure to it. Likewise, as demonstrated by the findings of this study in all of the participants' situations, digital gamification reflects an innovative and fun English learning activity (Redjeki & Muhajir, 2021). As previously disclosed by Nurul, Zaskia, Azzam, and Bilqis, the in-service EFL teachers at the institutions where they completed their teaching practice have not yet implemented digital gamification. These in-service EFL instructors may lack sufficient knowledge of digital

gamification, thereby they are hesitant to implement it (Zhu, 2022). They must therefore be prompted to enhance their digital competence.

To enable digital gamification to aid innovative and fun English learning for EFL students, the findings of this case study focus more on feedback, points, quizzes, rewards, challenges, time limits, and competition as gamification elements used by pre-service EFL teachers during a school-based teaching practice as discovered by Zhang and Hasim (2023) for the most frequently used gamification elements. In order to enhance the comprehensibility of these elements, Werbach and Hunter (2012) established a hierarchical structure for these categories: components, dynamics, and mechanics. Components encompass distinct attributes that symbolize the intended dynamics and mechanics, including but not limited to points, badges, and leaderboards. Mechanics are the processes that contribute to the excitement and engagement of a game. Competition, challenge, and win-state are the three most popular game mechanics. Dynamics comprises the fundamental components that ultimately motivate users or participants to progress, including feedback systems, boosters, and so forth (Man, 2021).

Having had a favorable experience with digital gamification, Nurul, Zaskia, Azzam, and Bilqis, the pre-service EFL teachers in this study, intend to apply this type of instruction in their future practice, despite certain challenges they may face by contemplating a cognitively driven approach like matching digital gamification type toward the English topic to balance learning outcomes with positive learning experiences, as proposed by Inayati and Waloyo (2022). This result is comparable to the study reported by Fernández-Portero and Castillo-Rodríguez (2022), in which 95.8% of 95 pre-service English teachers will employ gamification-based teaching strategies in the future. Briefly, the pre-service EFL teachers' identities in applying digital gamification have been shaped by the three belongings of social theory of learning: engagement, imagination, and alignment. In terms of engagement, they have tried to visit gamification sites and employed some of the platforms in the teaching practice. In terms of imagination, they intended to utilize workable digital gamification when becoming in-service EFL teachers after finishing their education. Finally, in terms of alignment, they all acknowledged the significance of digital gamification as demonstrated by their fruitful experiences and students' positive responses at schools.

## Conclusion

The findings of this study indicate that pre-service EFL teachers viewed digital gamification as contributing positively to the formation of their teacher identities. The function of the digital gamification is captured within their engaging experiences of becoming teachers who are modern, tech-savvy, innovative, and up-dated. They also wished to become teachers who manage to handle interactive exercises, stimulate fun brainstorming, build a good rapport with students, create an enjoyable English learning environment, gain students' attention in the classroom, assist students in better preparing for summative tests, and

prevent students from cheating. In this manner, digital gamification aided the pre-service teachers in connecting their past experiences of learning to teach as well as their current participation in a school-based teaching practice.

The present study is limited by the small number of participants and the reliance on written historical documents and semi-structured interviews for data collection. Therefore, further studies can expand various data collection methods, notably observations, in order to completely back up the research findings. Additionally, further studies should include the points of view of various stakeholders, such as teacher educators and in-service teachers serving as participants' teaching practice supervisors in schools, who play a significant role in the identity formation experiences of pre-service EFL teachers in the digital age.

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## References

- Abbott, R. (2016). Embracing digital technologies in classroom practice: The impact of teacher identity. *Australian Educational Computing*, 31(2), 1–26.
- Abusa'aleek, R. A., & Baniabdelrahman, A. A. (2020). The effect of gamification on Jordanian EFL sixth grade students' reading comprehension. *International Journal of Education and Training (InjET)*, 6(1), 1–11.
- Afrilyasanti, R., & Cahyono, B.Y. (2022). Gamification as a helping hand for students' learning adaptation due to covid-19 pandemic. *The Journal of AsiaTEFL*, 19(4), 1301–1310.  
<https://doi.org/10.18823/asiatefl.2022.19.4.11.1301>
- Ahmed, A. A. A., Widodo, M., Komariah, A., Hassan, I., Sukmana, N., Ali, M. H., Abbas, A. K., & Rohi, A. (2022). Assessing the effects of gamification on developing EFL learners' idiomatic knowledge: Do attitudinal factors contribute to the learning of the idioms with the game? *Education Research International*, 2022, 1–10. Article ID 2482570.  
<https://doi.org/10.1155/2022/2482570>
- Al-Eqabi, B. N. M. R., & Alnoori, B. S. M. (2021). The influence of using digital games in language teaching. *Multidisciplinary International Journal*, 1(7), 95–103.



- Antonek, J. L., McCormick, D. E., & Donato, R. (1997). The student teacher portfolio as autobiography: Developing a professional identity. *The Modern Language Journal*, 81(1), 15–27.  
<https://doi.org/10.1111/j.1540-4781.1997.tb01624.x>
- Apriliyani, D. (2020). A narrative inquiry of students teachers identity construction through teaching practicum: Voices from secondary school classroom in indonesia. *Wiralodra English Journal*, 4(2), 39–51.  
<https://doi.org/10.31943/wej.v4i2.108>
- Ary, D., Jacobs, L. C., & Sorenson, C.K. (2010). *Introduction to research in education* (8th ed). Wadsworth: Cengage Learning.
- Baxter, P., & Jack, S. (2015). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report*.  
<https://doi.org/10.46743/2160-3715/2008.1573>
- Beauchamp, C., & Thomas, L. (2009). Understanding teacher identity: An overview of issues in the literature and implications for teacher education. *Cambridge Journal of Education*, 39(2), 175–189.  
<https://doi.org/10.1080/03057640902902252>
- Beijaard, D., Meijer, P. C., & Verloop, N. (2004). Reconsidering research on teachers' professional identity. *Teaching and Teacher Education*, 20(2), 107–128. <https://doi.org/10.1016/j.tate.2003.07.001>
- Can, T., & Karacan, C. G. (2021). Exploring pre-service English teachers' early teacher identity in relation to emerging ICT technologies training. *Novitas-ROYAL (Research on Youth and Language)*, 15(1), 57–75.
- Chen, C.-M., Li, M.-C., & Chen, T.-C. (2020). A web-based collaborative reading annotation system with gamification mechanisms to improve reading performance. *Computers & Education*, 144, 103697.  
<https://doi.org/10.1016/j.compedu.2019.103697>
- Chen, Y., Burton, T., Mihaela, V., & Whittinghill, D. M. (2015). Cogent: A case study of meaningful gamification in education with virtual currency. *International Journal of Emerging Technologies in Learning*, 10(1), 39–45.  
<https://doi.org/10.3991/ijet.v10i1.4247>
- Chong, S., Low, E. L., & Goh, K. C. (2011). Emerging professional teacher identity of pre-service teachers. *Australian Journal of Teacher Education*, 36(8), 50–64.
- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed). Sage Publications.
- Denzin, N. K., & Lincoln, Y. S. (2008). *Strategies of qualitative inquiry*. Sage Publications.
- Dichev, C., & Dicheva, D. (2017). Gamifying education: What is known, what is believed and what remains uncertain: A critical review. *International Journal of Educational Technology in Higher Education*, 14(1).  
<https://doi.org/10.1186/s41239-017-0042-5>
- Dicheva, D., Dichev, C., Agre, G., & Angelova, G. (2015). Gamification in education: A systematic mapping study. *Educational Technology and Society*, 18(3), 75–88.





- Duff, P. A. (2008). *Case study research in applied linguistics*. Lawrence Erlbaum.
- Dugas, D. (2016). The ineffectiveness of “effective” management strategies: First-year teachers, behavior management, and identity. *Action in Teacher Education*, 38(1), 18–33. <https://doi.org/10.1080/01626620.2015.1078754>
- El Tantawi, M., Sadaf, S., & AlHumaid, J. (2018). Using gamification to develop academic writing skills in dental undergraduate students. *European Journal of Dental Education*, 22(1), 15–22. <https://doi.org/10.1111/eje.12238>
- Elias, S. K. (2018). Pre-service teachers’ approaches to the effectiveness of micro-teaching in teaching practice programs. *Open Journal of Social Sciences*, 06(5), 205–224. <https://doi.org/10.4236/jss.2018.65016>
- Ertmer, P. A. (1999). Addressing first- and second-order barriers to change: Strategies for technology integration. *Educational Technology Research and Development*, 47(4), 47–61. <https://doi.org/10.1007/BF02299597>
- Ertmer, P. A., & Ottenbreit-Leftwich, A. T. (2010). Teacher technology change: How knowledge, confidence, beliefs, and culture intersect. *Journal of Research on Technology in Education*, 42(3), 255–284. <https://doi.org/10.1080/15391523.2010.10782551>
- Fernández-Portero, I., & Castillo-Rodríguez, C. (2022). Gamification in the English language class: Analysis of pre-service teachers’ perceptions. *CALL-EJ*, 23(1), 425–444.
- Petriani, F., Lolita, E. F., & Saputra, E. (2021). English student’s teaching skills applied in microteaching class Muhammadiyah University of Bengkulu. *Journal of Education, Psychology and Counseling*, 3(2), 121–126.
- Fithriani, R. (2021). The utilization of mobile-assisted gamification for vocabulary learning: Its efficacy and perceived benefits. *CALL-EJ*, 22(3), 146–163.
- Flores, J. F. F. (2015). Using gamification to enhance second language learning. *Digital Education Review*, 27, 32–54.
- Flórez, S. A. S., & Basto, E. A. B. (2017). Identifying pre-service teachers’ beliefs about teaching EFL and their potential changes. *PROFILE Issues in Teachers’ Professional Development*, 19(2), 167–184. <https://doi.org/10.15446/profile.v19n2.59675>
- Gawronski, J., & Bell, A. (2018). Preservice teacher identity development in the digital age. *Academia.Edu*. [https://www.academia.edu/36599148/Preservice\\_Teacher\\_Identity\\_Development\\_in\\_the\\_Digital\\_Age](https://www.academia.edu/36599148/Preservice_Teacher_Identity_Development_in_the_Digital_Age)
- Gray, D. E. (2014). *Doing research in the real world*. Sage Publications.
- Haaranen, L., Ihantola, P., Hakulinen, L., & Korhonen, A. (2014). How (not) to introduce badges to online exercises. *SIGCSE 2014 – Proceedings of the 45th ACM Technical Symposium on Computer Science Education*, 33–38. <https://doi.org/10.1145/2538862.2538921>
- Hadfield, J. (2016). Multiple selves, materials, and teacher identity. In D. Barkhuizen (Ed.), *Reflections on language teacher identity research* (pp. 242–257). Routledge.



- Hamari, J. (2017). Do badges increase user activity? A field experiment on the effects of gamification. *Computers in Human Behavior*, 71, 469–478. <https://doi.org/10.1016/j.chb.2015.03.036>
- Hanus, M. D., & Fox, J. (2015). Assessing the effects of gamification in the classroom: A longitudinal study on intrinsic motivation, social comparison, satisfaction, effort, and academic performance. *Computers and Education*, 80, 152–161. <https://doi.org/10.1016/j.compedu.2014.08.019>
- Inayati, N., & Waloyo, A. A. (2022). The influence of Quizziz-online gamification on learning engagement and outcomes in online English language teaching. *Journal on English as a Foreign Language*, 12(2), 249–271. <https://doi.org/10.23971/jefl.v12i2.3546>
- Ivanova, I., & Skara-Mincane, R. (2016). Development of professional identity during teacher's practice. *Procedia – Social and Behavioral Sciences*, 232, 529–536. <https://doi.org/10.1016/j.sbspro.2016.10.073>
- Jesmin, T., & Ley, T. (2020). Giving teachers a voice: A study of actual game use in the classroom. *Information (Switzerland)*, 11(1), 1–20. <https://doi.org/10.3390/info11010055>
- Johannesen, M., & Habib, L. (2010). The role of professional identity in patterns of use of multiple-choice assessment tools. *Technology, Pedagogy and Education*, 19(1), 93–109. <https://doi.org/10.1080/14759390903579232>
- Kabilan, M. K. (2013). A phenomenological study of an international teaching practicum: Pre-service teachers' experiences of professional development. *Teaching and Teacher Education*, 36, 198–209. <https://doi.org/10.1016/j.tate.2013.07.013>
- Khaleel, F. L., & Sahari, N. (2016). The architecture of dynamic gamification elements based learning content. *Journal of Convergence Information Technology* 11(3), 164–177.
- Kim, J. T., & Lee, W. H. (2015). Dynamical model for gamification of learning (DMGL). *Multimedia Tools and Applications*, 74(19), 8483–8493. <https://doi.org/10.1007/s11042-013-1612-8>
- Kuswandi, D., & Fadhli, M. (2022). The effects of gamification method and cognitive style on children's early reading ability. *Cogent Education*, 9(1), Article 2145809. <https://doi.org/10.1080/2331186X.2022.2145809>
- Kwihangana, F. (2020). Preservice language teachers developing digital teacher identities through the process of positioning. *Proceedings of Society for Information Technology & Teacher Education International Conference*, 1179–1184. <https://www.learntechlib.org/primary/p/215882/>
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.
- Luo, Z. (2022). Gamification for educational purposes: What are the factors contributing to varied effectiveness? *Education and Information Technologies*, 27(1), 891–915. <https://doi.org/10.1007/s10639-021-10642-9>
- Luthfiyyah, R., Hafifah, G. N., Ivone, F. M., & Tresnadewi, S. (2021). Technology use in secondary level of English language teaching: A Literature Review. *JEEs (Journal of English Educators Society)*, 6(1), 79–89. <https://doi.org/10.21070/jees.v6i1.1020>



- Maharani, Y., Asih, Y. U., & Suhatmady, B. (2022). EFL pre-service teachers' identity and position during teaching practice. *Script Journal of Linguistic and English Teaching*, 7(1), 92–103.
- Man, C. K. (2021). *Game elements, components, mechanics and dynamics: What are they?* <https://medium.com/creative-culture-my/game-elements-components-mechanics-and-dynamics-what-are-they-80c0e64d6164>
- Mee, R. W. M., Shahdan, T. S. T., Ismail, M. R., Ghani, K. A., Pek, L. S., Von, W. Y., Woo, A., & Rao, Y. S. (2020). Role of gamification in classroom teaching: Pre-service teachers' view. *International Journal of Evaluation and Research in Education (IJERE)*, 9(3), 684–690. <https://doi.org/10.11591/ijere.v9i3.20622>
- Merriam, S. B. (2009). *Qualitative research. A guide to design and implementation*. Jossey-Bass.
- Mockler, N. (2011). Beyond 'what works': Understanding teacher identity as a practical and political tool. *Teachers and Teaching*, 17(5), 517–528. <https://doi.org/10.1080/13540602.2011.602059>
- Muluk, S., Habiburrahim, H., & Ardiansyah, A. (2020). Micro teaching course: Does it affect students' teaching ability? *Englisia: Journal of Language, Education, and Humanities*, 7(2), 143–155. <https://doi.org/10.22373/ej.v7i2.6712>
- Noroozi, O., Dehghanzadeh, H., & Talae, E. (2020). A systematic review on the impacts of game-based learning on argumentation skills. *Entertainment Computing*, 35. <https://doi.org/10.1016/j.entcom.2020.100369>
- Norton, B., & McKinney, C. (2010). An identity approach to second language acquisition. In D. Atkinson (Ed.), *Alternative approaches to second language acquisition* (pp. 73–93). Routledge.
- Nunan, D. (2016). Language teacher identity in teacher education. In G. Barkhuizen (Ed.), *Reflections on language teacher identity research* (pp. 164–169). Routledge.
- Nykvist, S., & Mukherjee, M. (2016). Who am i? Developing pre-service teacher identity in a digital world. *Procedia – Social and Behavioral Sciences*, 217, 851–857. <https://doi.org/10.1016/j.sbspro.2016.02.012>
- Olsen, B. (2008). *Teaching what they learn, learning what they live: How teachers' personal histories shape their professional development*. Paradigm.
- Olsen, B. (2016). *Teaching for success: Developing your teacher identity in today's classroom* (2nd ed). Routledge, Taylor & Francis Group.
- Otsupius, I. (2014). Micro-teaching: A technique for effective teaching. *African Research Review*, 8(4), 183–197. <https://doi.org/10.4314/afrrrev.v8i4.15>
- Panis, I. C., Setyosari, P., Kuswandi, D., & Yuliati, L. (2020). Design gamification models in higher education: A study in indonesia. *International Journal of Emerging Technologies in Learning (ijET)*, 15(12), 244–255. <https://doi.org/10.3991/ijet.v15i12.13965>
- Panmei, B., & Waluyo, B. (2022). The pedagogical use of gamification in english vocabulary training and learning in higher education. *Education Sciences*, 13(1), 24. <https://doi.org/10.3390/educsci13010024>

- Pradana, F., Setyosari, P., Ulfa, S., & Hirashima, T. (2023). Development of gamification-based E-learning on web design topic. *International Journal of Interactive Mobile Technologies (ijIM)*, 17(03), 21–38.  
<https://doi.org/10.3991/ijim.v17i03.36957>
- Pennington, M. C. (2015). Teacher identity in TESOL: A frames perspective. In Y. L. Cheung, S. B. Said, & K. Park (Eds.), *Advances and current trends in language teacher identity research* (pp. 16–30). Routledge.
- Rahayu, P., & Siregar, S. D. (2018). Teaching strategies in students' micro teaching performance. *English Language Teaching and Research*, 2(1), 202–211.
- Ramrathan, L., Grange, L. le, & Shawa, L. B. (2017). Ethics in educational research. In L. Ramrathan (Ed.), *Education studies for initial teacher development* (pp. 432–443). Juta.
- Redjeki, I. S., & Muhajir, R. (2021). Gamification in EFL classroom to support teaching and learning in 21st century. *Journal of English Educators Society*, 6(1), 68–78. <https://doi.org/10.21070/jees.v6i1.882>
- Richardson, P. W., & Watt, H. M. G. (2018). Teacher professional identity and career motivation: A lifespan perspective. In P. A. Schutz, J. Hong, & D. C. Francis (Eds.), *Research on teacher identity* (pp. 37–48). Springer.
- Salinas, D., & Ayala, M. (2018). EFL student-teachers' identity construction: A case study in Chile. *HOW*, 25(1), 33–49.  
<https://doi.org/10.19183/how.25.1.380>
- Sata, M. R. M., & Erna, E. (2020). An analysis of the teaching skill of English students in microteaching course at Madako University. *Jurnal Madako Education*, 6(2), 104–110.
- Sheldon, L. (2016). *The multiplayer classroom: Designing coursework as a game* (2nd ed). CRC Press.
- Siahaan, S. M. Y., & Subekti, A. S. (2021). Pre-service English teachers' professional identity development: A case study. *Metathesis: Journal of English Language, Literature, and Teaching*, 5(2), 198–203.  
<https://doi.org/10.31002/metathesis.v5i2.4231>
- Smiderle, R., Rigo, S. J., Marques, L. B., Peçanha de Miranda Coelho, J. A., & Jaques, P. A. (2020). The impact of gamification on students' learning, engagement and behavior based on their personality traits. *Smart Learning Environments*, 7(1). <https://doi.org/10.1186/s40561-019-0098-x>
- Su, F., Zou, D., Xie, H., & Wang, F. L. (2021). A comparative review of mobile and non-mobile games for language learning. *Sage Open*, 11(4), 215824402110672. <https://doi.org/10.1177/21582440211067247>
- Sutton, R. E., Mudrey-Camino, R., & Knight, C. C. (2009). Teachers' emotion regulation and classroom management. *Theory Into Practice*, 48(2), 130–137. <https://doi.org/10.1080/00405840902776418>
- Taşdemir, H., & Seferoglu, G. (2022). Understanding teacher professional identity: Voices from pre-service English language teachers. *Bartın University Journal of Faculty of Education*, 11, 702–717.  
<https://doi.org/10.14686/buefad.1112591>



- Thom, J., Millen, D., & DiMicco, J. (2012). Removing gamification from an enterprise SNS. *Proceedings of the ACM Conference on Computer Supported Cooperative Work, CSCW*, 1067–1070.  
<https://doi.org/10.1145/2145204.2145362>
- Tondeur, J., Roblin, N. P., van Braak, J., Voogt, J., & Prestridge, S. (2017). Preparing beginning teachers for technology integration in education: Ready for take-off? *Technology, Pedagogy and Education*, 26(2), 157–177.  
<https://doi.org/10.1080/1475939X.2016.1193556>
- Trent, J., & Shroff, R. H. (2013). Technology, identity, and community: The role of electronic teaching portfolios in becoming a teacher. *Technology, Pedagogy and Education*, 22(1), 3–20.  
<https://doi.org/10.1080/1475939X.2012.720416>
- Ulum, Ö. G. (2020). Pre-service English teachers' narrative identity. *Journal of Education Culture and Society*, 11(1), 92–101.  
<https://doi.org/10.15503/jecs2020.1.92.101>
- Valentyn, G. (2019). *Integrating new technology in the language classroom: Innovative teacher identities*. Unpublished Master of Art Thesis, Stellenbosch University. <https://scholar.sun.ac.za/handle/10019.1/107229>
- Waluyo, B., & Bucol, J. L. (2021). The impact of gamified vocabulary learning using quizlet on low-proficiency students. *CALL-EJ*, 22(1), 164–185.
- Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge University Press.
- Werbach, K., & Hunter, D. (2012). *For the win: How game thinking can revolutionize your business*. Wharton Digital Press.
- Yazici, E. A., & Atay, D. (2023). ICT transformation in education: Its impact on language teachers' professional identities. *Iranian Journal of Language Teaching Research*, 11(1), 141–156.  
<https://doi.org/10.30466/ijltr.2023.121276>
- Zhang, S., & Hasim, Z. (2023). Gamification in EFL/ESL instruction: A systematic review of empirical research. *Frontiers in Psychology*, 13, 1030790. <https://doi.org/10.3389/fpsyg.2022.1030790>
- Zhu, J. (2022). A study on China's TESOL pre-service teachers' knowledge and attitudes on gamification. *Proceedings of the 2022 8th International Conference on Humanities and Social Science Research (ICHSSR 2022)*, 664, 2907–2913. <https://doi.org/10.2991/assehr.k.220504.527>