

Enhancing Idiomatic Competence of Thai EFL Learners through Gamification

Nuntiporn Raungsawat*, Nantawan Kamsuriya,
Suwicha Saengroongpetch, Peeradej Koomwongthai

*Faculty of Humanities and Social Sciences, Rajabhat Rajanagarindra University
422 Marupong Rd., Na Mueang, Mueang, Chachoengsao, 24000, Thailand*

Received: November 17, 2025

Revised: March 8, 2026

Accepted: April 22, 2026

Abstract

One of the challenges for Thai students who learn English as a foreign language is understanding idiomatic expressions because most individual words in idioms do not convey literal meanings. Moreover, the learners also require a deep comprehension of sociolinguistic, cultural, and pragmatic functions of the idioms to facilitate their understanding. Therefore, idioms need to be delivered by using the appropriate teaching approach. To do this, teachers should understand how EFL learners acquire and use idioms in the process of communicating and enhancing their proficiency. Gamification, the current trend in language education, is widely suggested to be implemented in English classrooms to increase idiomatic competence of the learners. This review article aims to analyze the current state of English idiom teaching in Thailand and examine the efficacy of gamification in EFL classrooms. It also synthesizes empirical studies on gamification in Thai EFL contexts from 2014 to 2025 and proposes a three-stage framework for integrating gamification in idiom instruction by employing a narrative review of literature and previous research conducted in Thai educational contexts. The findings reveal that while gamification has been extensively applied to vocabulary, grammar, and communication skills in Thailand, its implementation for idiomatic competence remains unexplored. The proposed framework comprises Preparation, Implementation, and Assessment stages, providing practical guidelines for integrating gamification into curriculum

* Corresponding Author

อีเมล: nuntiporn.rau@gmail.com

design to effectively support Thai EFL learners, policymakers, and communities. However, challenges such as limited technological infrastructure and teacher preparedness were identified.

Keywords

Gamification, English Idioms, Idiomatic Competence, Thai EFL Learners, Language Teaching

Introduction

For English users, acquisition of idiomatic knowledge plays a significant role in effective communication (Apridayani et al., 2024). Idioms are generally accepted as an essential element commonly used in spoken and written language among native speakers (Na Ranong, 2014). It is estimated that native speakers produce approximately 7,000 idioms per week (Šarić, 2022) and 10-20 million utterances with idioms throughout their lifetime (Cooper, 1999).

However, understanding idioms is problematic for Thai EFL learners who are non-native speakers of English. To comprehend idiom expressions, the students need to go beyond dictionary definitions of words and grasp words' subtle and suggestive meanings (RahmtAllah, 2024). This is due to the fact that idioms are the construction of words, phrases, or expressions the learners cannot interpret their meanings literally. Put it simply, a single word in idioms does not convey an obvious meaning. Besides, idioms often carry figurative meaning and require learners' cultural interpretation. Dokchandra and Boonnoon (2023) assert that many Thai students find it difficult to distinguish ordinary English and idiomatic English as they cannot derive word meaning beyond the basic word level. For instance, *a piece of cake* is an idiomatic English, but *very easy* is an ordinary English. In addition, idioms are a low-frequency vocabulary (Simpson & Mendis, 2003) which less occur in a formal language, and they are frequently eliminated from the conversation of EFL learners.

To cope with difficulties in learning English idioms, explicit instruction called gamification is proposed to be implemented in EFL classrooms (Müller et al., 2017). According to Afifah and Priyana (2024), gamification has received significant interest as one of the educational strategies over the past decade. Also, it has become popular in teaching practice and research in recent years (Panmei & Waluyo, 2023). This can be clearly seen from the fact that numerous empirical studies conducted during the year 2010 to 2022 have investigated

the implementation of gamification into EFL pedagogy (Chan & Lo, 2024). Furthermore, Zhang and Hasim (2023) revealed that gamified intervention has been widely employed across several non-native English-speaking countries, such as Iran, China, Malaysia, Korea, USA, Spain, Turkey, and Netherlands to enhance learners' language skills, motivation, and engagement. This indicates that gamification or game-based learning is steadily increasing popularity in facilitating English language learning nowadays.

The use of gamification in English teaching and learning in Thai EFL classrooms is in line with educational goals outlined in Thailand's Education Reform Law of 1999 which includes promoting the learners' literacy, foreign language, technology competency, critical thinking, and lifelong learning (Kantamara et al., 2006). Furthermore, gamified approach is consistent with the characteristics of learners in the 21st century who are called as "digital natives". To elaborate, many of them have been brought up by their family with digital technologies such as smartphones, laptops, and other digital devices around them in learning environment. With this reason, Vathanalaotha (2022) recommend teachers to apply gaming elements combining with the subject contents to serve the needs and preferences of EFL learners. Leo and Rajkumar (2025) add that when the teachers incorporate gamification into idiom instruction, they can generate motivating learning environments that enhance learners' engagement and participation. To this end, this paper aims to illustrate a fundamental background of traditional teaching approaches for English idioms in Thailand. Importantly, it discusses how gamification could be implemented in idiom teaching and learning activities in Thai EFL classrooms.

Definitions of Idioms

There is no clear-cut definition of the term 'idiom' (Asl, 2013). Grant and Bauer (2004) state that idioms are a type of multi-word unit (MWU), which is "a fixed and recurrent pattern of lexical material sanctioned by usage" (p. 38). According to Rafatbakhsh and Ahmadi (2019), it is difficult to differentiate idioms and other kinds of MWU, such as collocations and phrasal verbs. Cooper (1999) describes idioms as "an expression whose meaning cannot always be readily derived from its constituent elements" (p. 233). Moreover, Gramley and Pätzold (2003) point out that idiom is "a complex lexical item which is longer than a word form but shorter than a sentence and which has a meaning that cannot be derived from the knowledge of its component parts" (p. 55). Müller et al. (2017) view idioms as "formulaic multiword units and,

as relatively set phrases, only limited grammatical adjustments are made when using them” (p. 2). Simpson and Mendis (2003) consider an idiom as “a group of words that occur in a more or less fixed phrase and whose overall meaning cannot be predicted by analyzing the meanings of its constituent parts” (p. 423).

Wright (2002) provides more in-depth definition of idioms which is related to cultural issue. That is, an idiom refers to a phrase characterized by a set of figurative expression native speakers recognize and it is usually connected to culture. Strakšiene (2009) states that idioms are considered as one of the most difficult parts of English vocabulary because they are culturally restricted and valid only within a specific culture. To correctly understand and properly use idioms, Kriengphan (2017) suggests learners to take cultural, religious, and traditional backgrounds into consideration. Apridayani et al. (2024) add that the political, historical, and socio-cultural backgrounds are related to the meanings of idioms which are strongly influenced by the context. Thus, it is needed to raise learners’ cross-cultural awareness and enhance understanding of second language culture when learning idioms.

Classifications of Idioms

Grant and Bauer (2004) categorize idioms based on their semantic, syntactic, and functional features. For semantic consideration, idioms are labeled according to a scale or continuum of idiomaticity ranging from the least to the most idiomatic patterns. On this point, Fernando (1996) classifies idioms into three types including pure idiom, semi-literal idiom, and literal idiom. Pure idiom refers to a non-literal set expression whose meaning is not a compositional function of its syntactic constituents, but which always has a homonymous literal counterpart such as *spill the beans* means to *tell people secret information*. This type of idioms is challenging for learners of English because the accurate meaning of the idioms is totally different from their literal meaning. Semi-literal idiom has one or more literal constituents and at least with a non-literal subsense such as *foot the bill* means to *pay for something that is expensive*. Semi-literal idiom is not difficult for learners since the meaning of some words in the idioms provide literal meaning. Literal idiom refers to an idiom which its actual meaning can be understood by the literal meaning. Learners can easily comprehend this kind of idioms such as *on foot* means *walking*.

In terms of syntactic characteristics of idioms, Makkai (1972) emphasizes that an idiom is composed of at least two words and conventional expressions. Also, Flavel and Flavel

(2000) maintain that idioms are ‘very fixed grammatically’ (p.6). These include any types of immediate constituent such as verb + noun, e.g. *blow the gaff*; preposition + noun, e.g. *under the weather* (Howarth, 1998, p. 28). Arnold (1986) classifies idioms based on syntactic structures or parts of speech into seven kinds: nominal idioms, verbal idioms, adjectival idioms, adverbial idioms, prepositional idioms, conjunctive idioms, and interjectional idioms. Nonetheless, this classification provides descriptions rather than definitions (Šarić, 2022). Providing syntactic information can help learners understand several grammatical patterns of idioms.

Regarding functional features of idioms, it appears that functions of idioms are varies with spoken and written genre. Koonin (1970) divides English idioms into four types from a functional perspective. The first type is nominative idioms which refer to the idioms that function as nouns, adjectives, or adverbs denoting names, objects, concepts, or qualities such as *under the weather* (feeling unwell) and *white elephant* (a possession that is useless or troublesome). The second type is nominative-communicative idioms. They act as naming units (nominative) and a complete sentence conveying a message (communicative) such as *Every cloud has a silver lining*. and *Don't count your chickens before they hatch*. These often also carry wisdom or folk sayings. The third type is interjectional idioms, expressions that function as interjections, expressing emotions, feelings, or reactions such as *Good heavens!* and *Oh, my goodness!* The last type is communicative idioms which mean figurative expressions used for communicative purposes such as *beat around the bush* (used for avoiding a topic) and *hit the nail on the head* (used for giving opinions).

Teaching and Learning English Idioms in Thai EFL Context

Although the competency of idioms is essential for learners and indicates nativelike fluency, teaching English idioms in Thai educational context has less priority when compared to other English grammatical points (Kriengphan, 2017). Asl (2013) adds that idiom instruction has not received adequate attention because grammatical structure acquisition has been promoted over the past decades rather than the acquisition of lexical elements. In many cases, learners are not aware of the existence of idioms and look at them as separated units causing the errors occur (Šarić, 2022). Additionally, EFL teachers often stay away from idioms or simplify them in language classrooms since they are afraid of idioms’ complexity (Asl, 2013; Liu, 2008).

Idioms normally have their roots in particular historical and cultural contexts. As a result, learners who are unfamiliar with the language's background may struggle to understand them without additional context or explanation (Sevara, 2025). Even advanced learners are also likely to be problematic in recognizing idioms that they encounter (Rungsripattanaporn & Na Ranong, 2018). As obviously shown in the research finding of Apridayani et al. (2024), fifty fourth-year English major students from a university in southern Thailand reported that idioms were challenging to identify when they appear without context, and they encountered difficulty on idioms because of their limited knowledge and cultural background. In this aspect, the teachers should be noted that not only linguistic competence, but the learners also need pragmatic and intercultural competence to overcome idiom learning difficulties.

Due to the fact that idioms are frequently used in everyday conversation by native speakers, teaching them should receive much more attention. In Thai EFL classrooms, like other educational settings, English idioms are typically taught by dictionary-based methods, vocabulary lists, textbook drills, rote memorization, and repetition which do not provide essential contexts assisting them to understand the idioms (Sevara, 2025). Plus, traditional methods of teaching idioms primarily depend on the judgment of teachers, and idiom teaching materials are mostly intuition-based (Rafatbakhsh & Ahmadi, 2019). These conventional approaches are believed to hinder natural and fluent communication of the learners since they lack opportunity to expose to idioms in authentic settings which can result in short-term memorization. Martinez and Murphy (2011) agree that idioms are difficult to acquire through traditional instructional methods because they often convey meaning that cannot be easily understandable from their individual components. Accordingly, Na Ranong (2014) suggests EFL teachers to design teaching materials and provide learners enough exposure to authentic texts such as news, advertisement, political speeches, where idioms are naturally employed via proper teaching method which can gradually increase learners' idiomatic competence.

Gamification

In the digital era, current language education has been shifted from lecture-based instruction to more engaging and personalized learning through online platforms, AI-driven instruction, and new teaching approach like gamification that foster lifelong learning competencies (O'Brien & Pitera, 2019). Leo and Rajkumar (2025) define gamification as "the use of game design elements in non-game contexts" (p.56). According to Kapp (2012),

gamification refers to an approach that use game-based mechanics to engage people, motivate action, promote learning, and solve problems. For educational purpose, gamification is integrated to encourage learners to exhibit behaviors that meet the game creator's design since it supports the progress in accomplishing educational tasks. Bicen and Kocakoyun (2018) add that another aim of gamification is to make the learning process more attractive to learners. With this method, learners can have more opportunity to access tailored resourced, collaborate with peers and immerse themselves in learning experiences. Also, it helps increase language learners' engagement, motivation, enjoyment, academic achievement, critical thinking, learning autonomy, and retention.

Many features of games are adapted to be used in gamification. For example, points are used to accumulate individual students' scores in a learning task. Badges are applied as rewards when achieving given assignments. User ranking is finalized according to user achievements (Vathanalaoha, 2022). Gamification supports students to achieve learning outcomes and foster a sense of community through game features, such as feedback, points, quizzes, badges, leaderboard, rewards, competition, and challenges (Rodjanagosol, 2024; Sailer & Homner, 2020; Zhang & Hasim, 2023). The main components required in gamification include mechanics, aesthetics, thinking, engage, people, motivation, learning, and problem solving (Nilubol & Sitthitikul, 2023). Examples of gamification such as *Kahoot!*, *Socrative*, *Quizizz*, and *Mentimeter* have been proven to enhance EFL learners' motivation and academic achievement in online learning environments (Temel & Cesur, 2024). Currently, gamification in language learning has been increasingly combined with artificial intelligence (AI). AI-powered gamification enhances personalized learning paths, engagement, motivation through rewards, and accessibility through adaptive feedback. However, gamified AI tools should be employed as a supplementary rather than a replacement for human instruction to ensure that students receive both technical help and human-guided language practice (Salmanova, 2025).

According to Laksanasut (2025), gamified EFL learning is different from traditional approach because it increases learners' interaction, intrinsic and extrinsic motivation, engagement, provides immediate and real-time feedback, encourages collaboration through multiplayer, team challenges and creates adaptive learning pathways. For teachers and educators who desire to implement gamification in teaching and learning process, three necessary game elements should be included: dynamics, mechanics, and components. Game dynamics is status, reward, self-expression, competition under rules that are explicit and

enforced achievement. Game mechanics refer to level-system, narrative context, challenge, achievements, and leaderboard. Game components mean self-representation with avatars, feedback, points, trophies, badges, progress bar, and virtual presents. Altogether, these game elements are intended to draw students' feelings of interest, foster competitiveness and curiosity, enhance a need-oriented procedure of learning, and even change the students' behaviors (Bicen & Kocakoyun, 2018; Temel & Cesur, 2024; Zhang & Hasim, 2023).

Theoretical Foundations in Gamified Learning

Several theories are associated with gamification including Behavioral Learning Theory, Self-Determination Theory (SDT), Social Learning Theory, Cognitive Load Theory, and Flow Theory.

Behavioral Learning Theory

Developed by Skinner (1974), Behavioral Learning Theory or Behaviorism claims that people learn through their interactions with the environments. Human behaviors are acquired and shaped through conditioning such as rewards and reinforcement. Based on this theory, gamification promotes learning by changing learners' observable behavior that results from their experience. Providing points and rewards in the game can motivate learners by offering incentives for completing tasks. This helps encourage specific actions in learning, namely, language proficiency, motivation, engagement, critical thinking, and problem solving.

Self-Determination Theory (SDT)

According to Ryan and Deci (2020), Self-Determination Theory (SDT) focuses on the effects of three fundamental psychological needs on intrinsic motivation, i.e. autonomy (the freedom to choose), competence (a sense of capability), and relatedness (connection with others). Thakur (2024) describes that gamification taps into these components by allowing learners to make choices (autonomy), set and achieve goals (competence), and interact with others (relatedness). Game elements such as points, badges, leaderboards, levels, and quests can give learners the freedom to engage in their own way while feeling a sense of achievement and community. Consequently, this approach can enhance intrinsic motivation, making learners more invested and enthusiastic.

Social Learning Theory

Introduced by Albert Bandura (1971), Social Learning Theory emphasizes that learning occurs through observation and interaction with others. Also, learning is influenced by key

factors including attention (noticing the behavior), retention (remembering what we saw), reproduction (being able to duplicate it), and motivation (wanting to reproduce the behavior due to rewards). Cherry (2025) states that instead of relying only on first-hand experience or trial-and-error, we observe what other people do, notice the results, and use that information to guide our own actions. Gamification provides social features like leaderboards and collaborative challenges that foster users to learn from and compete with their peers. These social interactions can promote learning experience, build a sense of community, motivate users to engage in a leaderboard or participating in group challenges more actively, and share their experiences.

Cognitive Load Theory

Cognitive Load Theory, initiated by Sweller (1994), is an instructional framework that explains how the brain processes and retains information by managing the limitations of working memory. Put it simply, cognitive load refers to “the degree of difficulty that people have in remembering what they have been taught” (Baah et al., 2024, p.4). This theory claims that human working memory capacity can be overloaded if their learning is obstructed. To improve students’ learning efficiency and prevent mental overload, Sweller et al. (2019) suggest teachers to design their instruction by managing three types of cognitive load: (1) intrinsic load (complexity of the content and teaching materials); (2) extraneous load (distractions or poor instructional design); and (3) germane load (schema building for long-term retention). According to Baah et al. (2024), gamification is an approach that reduces cognitive load to ultimately improve learning outcomes because it raises student engagement in learning. Also, immersing students in gamified learning can diminish their cognitive load and enhance their understanding of a subject.

Flow Theory

Flow Theory or Optimal Experience Theory was firstly defined by Mihaly Csikszentmihalyi in 1990 as a psychological condition in which individuals experience a state of “flow” when they are fully involved in an activity that are appropriate to their skill level (Csikszentmihalyi, 1990). In other words, the task must be challenging but attainable. If the task is too easy, learners may become bored, but if it is too difficult, learners may become anxious and stressed. According to Laksanasut (2025), flow theory enhances optimal engagement in terms of focus, enjoyment, and intrinsic motivation. Liao and Noor (2025) describe that when students achieve flow states, superior learning performance is exhibited.

For gamification, incorporating flow theory helps balance challenge and skill, provide immediate feedback, and allow players autonomy and control. Thus, game designers and developers who aim to create learning environment with high motivation should add game components that enhance immersion, engagement, and both mental and physical challenges.

Previous Studies in Thai EFL Context

Empirical research carried out in Thai EFL settings has illustrated several benefits of gamification across educational levels. In terms of vocabulary knowledge, Panmei and Waluyo (2023) investigated the effects of an online gamification tool called *Quizizz* on vocabulary learning of 100 Thai first-year undergraduate students. Results from vocabulary test showed that the students in the experimental groups who were taught with the gamified learning method achieved higher scores. Surveys also revealed that the students in the experimental group enjoyed vocabulary learning more than those in the control group who did not receive *Quizizz* assistance. In this study, research instrument validation was conducted to ensure research validity and reliability. Nevertheless, it employed only quantitative approach. Qualitative data collection should also be integrated to provide a more complete picture of students' learning experiences with gamification apps. Rodjanagosol (2024) conducted a 12-week course to investigate the impact of gamification on English vocabulary acquisition among 100 Thai adult beginners. Results revealed that gamification approach enhance vocabulary retention of adult learners in the experimental group than traditional method. Semi-structured interview results of ten informants from each group revealed three key themes: increased motivation, enhanced retention, and perceived effectiveness of instant feedback. This study addressed an existing research gap because adult learners, who are significant for English language learning community, have received less attention from the literatures. Moreover, all participants had a basic level of English proficiency based on pre-test scores. This selection criteria ensured that participants were relatively homogeneous regarding initial proficiency. However, only ten interviewees from each group may not be sufficient to represent the population and to completely gain deeper insights into their experiences and perceptions of the gamification learning method.

For grammar competence, Zimik et al. (2024) examined the effects of *Kahoot!* in grammatical knowledge of 52 Thai EFL first-year university students over four weeks. Test results showed that gamified grammar learning was more effective than traditional learning approach. A thematic analysis from the students' reflective essays disclosed their experiences

in learning English grammar using *Kahoot* into five themes: learning effective, enjoyment and fun, teacher's influence, self-improvement, and learning benefits. This study used multiple data collection methods, including quantitative and qualitative approach which increase the credibility and validity of research findings. Nonetheless, it was conducted in four weeks which may not yield the long-term effect of gamification approach on the students' grammatical knowledge. Rofiah and Waluyo (2024) conducted an eight-week English course by using *Kahoot!*, *Quizizz*, and *Quizlet* in grammar instruction for 107 Thai EFL first-year university students. Survey findings revealed that the students reported that the intervention highly improved their learning performance, motivation, enjoyment, classroom dynamics and engagement. In addition, the students with high proficiency level would likely enjoy and be engaged more in gamified learning than low-level students. The study allowed the students to learn grammar through a variety of game platforms to match their diverse needs and learning styles, resulting in the increase of learning enjoyment and achievement. Nevertheless, only quantitative data collection was applied in this study which may not capture the complexity, diversity, or richness of the phenomena under the investigation. Qualitative approach such as interviews or observations should also be conducted to provide more comprehensive, meaningful insights, and detailed descriptions of the phenomena. Arunsirot (2021) integrated *Classcraft* in English classroom over 14 weeks for 64 second-year English major students in a Thai university to promote their English syntactic knowledge. Results from the test showed that the integration of gamification approach in the learning process could significantly enhance the students' English syntactic knowledge. Findings from the questionnaire revealed positive attitude towards the implementation of the gamification approach because the application increased their memory and it was user-friendly. The questionnaire used to measure the students' opinions on the integration of gamified teaching method in this study evaluated by three experts with a high level of reliability, indicating that the findings are stable and dependable. However, selection criteria, such as random sampling method for placing participants in the experiment and control group was not carried out. Therefore, every member of a population may not have an equal chance of being selected to ensure a representative sample and minimizing bias.

Regarding English communication skills, Vathanalaoha (2022) integrated gamification called *Winner English* into English classes of 1,556 Grade 9 students from 16 local secondary schools in Thailand to enhance their English learning performance in speaking, listening,

writing, and reading. Findings indicated that the students from the experimental group had two times higher learning development than the control group. Content analysis from participant feedback showed students' positive attitude towards the application since it offered an excellent opportunity to practice English accurately. With large numbers of participants from many different local schools in Thailand, this study could provide more accurate results and increasing the reliability, accuracy, and generalizability of the findings. However, English proficiency levels of the participants in the experimental and control groups were not assessed prior to the integration of *Winner English*. This flaw would lead to biased results because it may be difficult to ensure language ability equivalence of the students in two groups at the start of the study. The improvements may be a result from pre-existing, higher proficiency levels in one group rather than the intervention of the game application. Ratsamee et al. (2025) examined the effects of gamification on English spelling achievement of 32 Grade 3 students in a Thai primary school. Findings showed that the experimental group which received gamification-based instruction achieved superior spelling ability compared to the control group which was taught through conventional method. Overall satisfaction with the gamified lesson of the students was also at the highest level. This study employed a cluster random sampling method to select the students for the experimental and control groups. This approach ensures equal selection chances and strengthens the representativeness of the sample and the generalizability of the research results. Nevertheless, the study used only quantitative data collection, but none of the qualitative approach was conducted, which helps the researchers gain a complex and deepen understanding of data or results in a specific context. Matyakhan et al. (2024) explored the gamification's effects on reading comprehension of 70 first-year Thai EFL university students. Results showed that the experimental group improved reading comprehension and reading engagement after the integration of gamification, compared to the control group that studied traditionally. The participants in the experimental group also reported positive perceptions towards gamification in terms of promoting reading engagement and creating fun learning environment. Mixed-methods research design involving the collection and analysis of both quantitative and qualitative data in order to provide a more comprehensive answer to research questions was applied in this research. However, English proficiency of the participants in the experimental and control groups was not assessed before the implementation of gamification to identify

initial English ability level of the participants in the same group. Summary of previous studies on gamification in Thai EFL contexts is displayed in Table 1.

Table 1 Summary of Studies on Gamification in Thai EFL Contexts

Researchers	Participants	Gamified Tools	Findings
Vocabulary Learning			
Panmei & Waluyo (2023)	100 Thai first-year undergraduate students	<i>Quizizz</i>	- Students who were taught with <i>Quizizz</i> achieved higher scores on vocabulary test. - Students who were taught with <i>Quizizz</i> enjoyed vocabulary learning more than students who did not receive <i>Quizizz</i> assistance.
Rodjanagosol (2024)	100 Thai adult beginners	Gamified instruction	- Gamification approach could enhance vocabulary retention of adult learners. - Survey and Interview revealed three themes: increased motivation, enhanced retention, and perceived effectiveness of instant feedback
Grammar Competence			
Zimik et al. (2024)	52 Thai EFL first-year university students	<i>Kahoot!</i>	- Gamified grammar learning is more effective than traditional learning approach. - A thematic analysis from the students' reflective essays disclosed five themes: learning effective, enjoyment and fun, teacher's influence, self-improvement, and learning benefits.
Rofiah & Waluyo (2024)	107 Thai university students	<i>Kahoot! Quizizz, Quizlet</i>	- Students reported that gamified tools highly improved their grammar learning performance, motivation, enjoyment, classroom dynamics and engagement. - Students with high proficiency level would likely enjoy and be engaged

Table 1 Summary of Studies on Gamification in Thai EFL Contexts (Continue)

Researchers	Participants	Gamified Tools	Findings
			more in gamified learning than low-level students.
Arunsirot (2021)	64 Second year English major students in Thai university	<i>Classcraft</i>	- The integration of <i>Classcraft</i> could significantly enhance the students' English syntactic knowledge. - Students had positive attitude towards the implementation of the gamification approach.
Communication Skills			
Vathanalaotha (2022)	1,556 Grade 9 students from Thai secondary schools	<i>Winner</i>	- Students from the experimental group had two times higher learning development. - Students showed positive attitude towards the application.
Ratsamee et al. (2025)	32 Grade 3 students in a Thai primary school	Gamified instruction	- Students in experimental group achieved superior spelling ability. - Overall satisfaction with the gamified lesson of the students was at the highest level.
Matyakhan et al. (2024)	70 Thai first-year university students	Gamified instruction	- Students in experimental group improved reading comprehension and reading engagement. - Students reported positive perceptions towards gamification.

Based on the review of existing studies, it can be said that gamification has been increasingly implemented in Thai EFL classrooms to improve the learners' performance in learning English language such as vocabulary learning, reading ability, syntactic knowledge and other factors like motivation and autonomy. However, the implementation of gamification to enhance idiomatic competence has been unexplored in Thai educational contexts. Therefore, there is a need to bridge the gap and underscore the importance of idiomatic competence of Thai EFL learners as an essential element in language education. As stated by Arunsirot (2020), gamification would be a sensible approach to fulfill this gap in Thai educational system.

Challenges of Gamification in Teaching Idioms

Despite past studies have revealed numerous benefits of gamification in assisting students' learning experiences in EFL settings, some challenges in integrating it for enhancing learners' idiomatic knowledge should be concerned. One major challenge is idiom selection. Not all idiom expressions are appropriate for all students. The teachers are suggested to consider the learners' factors like ages, cultural background, and level of their English proficiency when choosing idioms to teach. Furthermore, useful idioms for the students' need should be provided in the instruction. Because of a large number of English idioms in different themes such as idioms related to animals, body parts, sports, food, colors, and many more, EFL teachers possibly find difficulty in selecting idioms to teach in their classroom. To solve this problem, corpus linguistics can help identify more frequently found idioms along with their use patterns appeared in real language to give priorities in teaching and learning context (Liu, 2003). By so doing, idioms would be taught under categories of their common themes and topics. Put it simply, the teachers will focus on more useful and frequently repeated language patterns rather than spending time on the less frequent ones. To do this, the idioms are chosen based on what is more important and beneficial to teach first. In this regard, selected idioms in gamification approach can represent authentic use in natural language. Moreover, the learners are provided an opportunity to expose to idiom expressions used in real contexts. Compared to intuition-based sources, the selection of idioms based on corpus studies would be more systematic and rigorous (Rafatbakhsh & Ahmadi, 2019).

Selecting the game is another issue that should be considered. As Leo and Rajkumar (2025) mention, to implement games is easy, the most difficult part is to find suitable games for the learners. Fuchs (2023) points out that the game elements should be aligned with the learning objectives. If not, they may fail to achieve meaningful learning outcomes. For example, a quiz question which may add an element of competition and excitement in learning, but if it is not relevant to the lesson being learned, the students may simply memorize the correct answer to earn points rather than engage in deep learning. This can result in a lack of engagement and participation in gamified learning. To implement gamification in idiom learning contexts effectively, the training program for the teachers is highly required. According to Zimik et al. (2024) teachers have positive attitudes towards gamification, but they lack practical knowledge regarding the use of digital games in language learning. Also, Zhang and Hasim (2022) report that one of the disadvantages when

implementing gamification in EFL classroom is the technical issues. Technical barriers, such as insufficient infrastructure and teachers' levels of digital literacy, can hinder the effective use of digital tools (Panda, 2024). In this case, educational institutions should offer game-based training programs to the teachers for tackling new challenges of technology and gamification in English language learning.

Mishra and Koehler (2006) suggest Technological Pedagogical Content Knowledge (TPCK) framework for the teachers to develop an understanding of three main components of learning environments: content, pedagogy, and technology. This model focuses on aligning technological tools with pedagogical strategies and subject to enhance instructional effectiveness. To elaborate, content knowledge is knowledge about the subject content that is to be learned or taught. Pedagogical knowledge is knowledge about the processes and practices or methods of teaching and learning. Technological knowledge is knowledge about standard technologies, such as books, chalk and blackboard, and more advanced technologies, such as the Internet and digital video as well as the skills required to operate particular technologies. Employing this framework in game-based training programs can ensure that gamification and educational technology can effectively support the professional development of all EFL teachers who want to enhance their students' idiomatic competence by using gamification teaching method.

Limitations of Gamification

Gamification offers several benefits to English language education. On the other hand, its potentials to improve learning outcomes can be diminished with some limitations. Firstly, not all students have equal access to technology. This can affect learners' ability to fully participate in gamified learning environments (Wulan et al., 2024). To tackle this issue, the teachers should provide alternative non-digital gamified learning methods by using physical materials, such as board games, card games, or role-playing games for the students who may have limited access to technology (Hamari et al., 2014). Secondly, the students may lose motivation in learning when rewards given in the gamification approach are removed. The teachers can mitigate this problem by setting meaningful learning objectives over game mechanics to foster the students' intrinsic motivation and long-term engagement (Laksanasut, 2025). Lastly, gamification may not be effective for all learning styles. Some students prefer more structured and linear learning environments and do not enjoy playing games. This could

make gamification less effective and discourage them from participating. To avoid this problem, the teachers should offer a variety of learning pathways allowing the students to choose different types of activities or assignments that match their learning styles and preferences in addition to gamification, such as lectures, discussions, and hands-on activities (Fuchs, 2023).

Practical Implications of Game-Based Idiom Learning for Teachers, Policymakers, and Students in Community

Since the idiomatic expressions are complex linguistic components that convey nuanced meaning, teaching them should be well-planned. Using game elements combined with English idiom lessons helps increase Thai learners' idiomatic competence, motivation, and engagement. To address a research gap found in this paper, that is, gamification has been successfully integrated for vocabulary, grammar, and communication skills in Thailand, but its application for enhancing idiomatic competence remains unexplored. Thus, gamification idiom instruction or game-based idiom learning is highly recommended in Thai EFL classrooms.

To make teaching idioms through gamification more efficiently, the framework with three key stages is proposed for language teachers, policymakers, and students in a community. The three-stage framework is adapted from the idiom comprehension model of proficient learners found in the study of Na Ranong (2014), including a preparatory stage, a guessing stage, and a post-guessing stage. In addition, various techniques for teaching idioms suggested by Mehdi (2024), namely contextual learning, using visual aids, corpus linguistics applications, and interactive activities are also integrated into the instructional processes.

At the first stage, Preparation, the teachers define learning objectives for the lesson. Needs analysis regarding the use of English idioms should be conducted to identify gaps between what the students can do and what they want to learn. To do this, the students are encouraged to perform specific actions in learning as described in Behavioral Learning Theory. Next, the teachers select appropriate idioms based on learning objectives, students' needs, proficiency level, and common themes and topics. Then they choose a suitable online platform to create interactive idiom games, e.g., *Kahoot!*, *Quizlet*, *Crosswords*, and *Idiom Matching*. For the second stage, Implementation, the teachers offer interactive games with multimedia resources like visual aids, videos, audio clips, and various game modes, such as single-player, multi-player, or team-based caters to different learning styles. A variety of game

elements should also be added such as challenges, feedback, competition, cooperation, and rewards. With these game components, the students have a chance to make choices by themselves, set and achieve goals, and interact with their classmates. This notion is supported by Self-Determination Theory (SDT) because the students have freedom to engage in their own way. Importantly, the selected idioms should be presented in sample sentences with the rich of contextual clues in real-life situation which can help the students guess the meanings of unfamiliar idioms. At the third stage, Assessment, the learners are evaluated whether they achieve learning outcomes. After the game, the students are asked to complete assignments. They can work individually, in pairs, groups or the whole class to review previously learned idioms, such as matching exercises and role-playing. These tasks are in accordance with Social Learning Theory since the students can learn idioms and share their experience through observation and interaction with others. To ensure accurate idiom use, a pragmatic idiom test should be conducted to assess the ability of the students to understand and appropriately use idiomatic expressions within specific social contexts, rather than simply knowing their literal definition. Idiom assessment should be given at the end of the course in different format, such as multiple choice, filling in the blank, essay, oral presentation, and project to improve learners' performance. Finally, the teachers should provide the students feedback to identify their areas of improvement and allow them to notice and correct their errors on idiom use. The framework for integrating gamification in idiom instruction is illustrated in Figure 1.

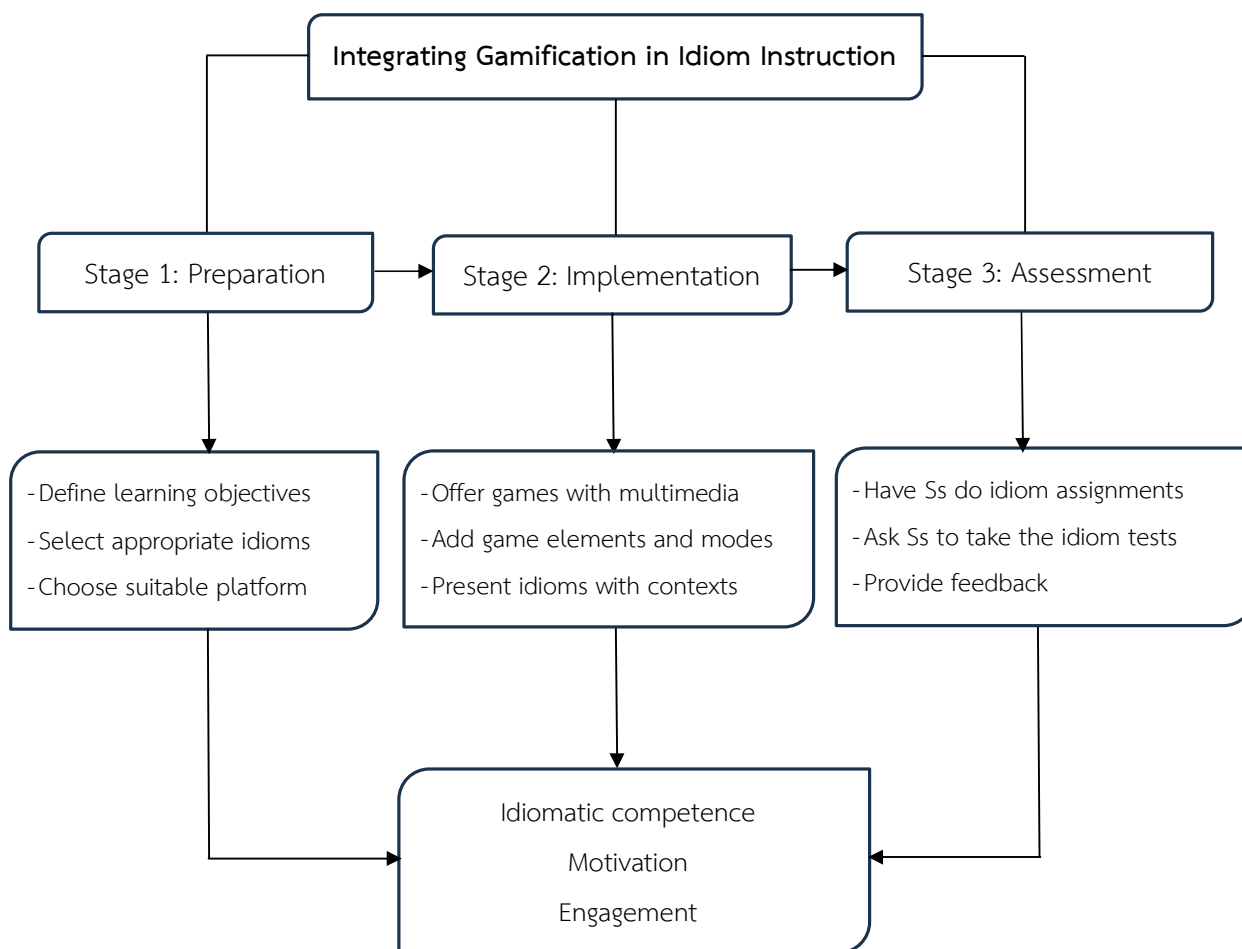


Figure 1: Framework for Integrating Gamification in Idiom Instruction

To successfully implement the above framework, policymakers need to set clear goals, measurable objectives, and align them with the mission of the educational institution to guarantee that the use of technology for digital gamified learning is purposeful and achieves its optimal potentials (Clugston, 2024). Additionally, policymakers and curriculum developers should incorporate digital media literacy into curricula to prepare learners to understand the ability to access and participate in digital media. Furthermore, policymakers should support the teachers to integrate games into their instructional practices and set guidelines for gamification approach used in educational environments. Lewis (2024) recommends that schools should provide teacher training in gamification which is crucial for preparing educators to leverage digital tools and resources to boost student learning. Investing in teacher technology training will ensure that educators are well-prepared to lead their students into a

technologically advanced future. In a nutshell, applying these policies together ensures that the integration of gamification can promote students' learning outcomes and support teachers in education.

The approach of gamification idiom instruction can also be integrated in academic service projects in a community. Schools or universities can organize projects to utilize games and creative activities aiming to empower local students' English language skills. Also, gamified challenges and competitions can be held to encourage community participation and provide opportunities for local students to expose to English language. In order to achieve learning objectives, participants may collaborate or compete with one another, receiving rewards or acknowledgment for their efforts. In this way, gamification approach helps foster a sense of community engagement and encourage data sharing and collaboration (Zeena, 2024). Using games in academic services transforms language education into enjoyable and effective process, bringing about improved student learning outcomes. In short, combining classroom learning with community service projects allows students to employ English skills in real-world tasks through digital and non-digital games. This benefits the community and bridge the gap between theory and practical application.

Conclusion

This review article has synthesized the current state of gamification studies in Thai EFL contexts and proposed a three-stage framework for implementing gamification in idiom instruction. The key contribution of this paper lies in identifying a significant research gap, i.e. while gamification has been successfully integrated for vocabulary, grammar, and communication skills in Thailand, its application for enhancing idiomatic competence remains uninvestigated. Also, it is found that gamification provides an innovative approach to idiom instruction as well as transforms language learning into an engaging and interactive experience (Leo & Rajkumar, 2025).

As a research gap identified earlier, scholars and educators are encouraged to examine the use of gamification in Thai EFL classroom to improve learners' idiomatic competence in addition to other elements in language learning such as vocabulary and grammar. Moreover, longitudinal studies should be conducted in the future to explore the long-term potentials of gamification-based learning on idiomatic knowledge of the students. Further studies should collect data from a larger group of the students to confirm the results of the previous research.

Rather than using only interview, future research should also employ various qualitative approaches such as observations or checklists to gain more in-depth findings. Besides, future studies should be carried out to investigate the effects of gamification on learners' idiom competency through different gamified platforms to compare similarities and differences of the results.

For English teachers at all educational levels in Thailand, gamification approach in idiom instruction should be employed with a three-stage framework: Preparation, Implementation, and Assessment, either as a major learning tool or as a supplementary. Based on this framework, not only idiomatic competence, but the students also maximize their motivation and engagement in learning English language. For policymakers, policies and guidelines regarding incorporating games in idiom teaching should be set and implemented for educational institutions to encourage students' digital literacy and language proficiency as outlined in Thailand's Education Reform Law of 1999. Importantly, it should be noted that this review focused primarily on studies conducted in Thai EFL contexts and may not be generalizable to other settings and student population. Moreover, although gamified learning has several benefits in language learning, some key issues are of concern, namely selection of the idioms, selection of the game, and the need for teacher training.

References

- Afifah, A., & Priyana, J. (2024). How can gamification help language learners? Insight from EFL students and teachers. *International Journal of Educational Research & Social Sciences*, 5(4), 771-777. <https://doi.org/10.51601/ijersc.v5i4.867>
- Apridayani, A., Chatwichit, N., Supanpong, T., & Kanto, S. (2024). Investigating the challenges and strategies of Thai university students in mastering English idioms. *Journal of Language & Education*, 10(1), 25-34. <https://doi.org/10.17323/jle.2024.16842>
- Arnold, I. (1986). *The English word*. Vuissahaya Shkola.
- Arunsirot, N. (2021). Integration of gamification approach In EFL classroom context. *Journal of Education and Innovation*, 23(4), 30-45. https://so06.tci-thaijo.org/index.php/edujournal_nu/article/view/241676
- Asl, F. M. (2013). The impact of context on learning idioms in EFL classes. *MEXTESOL Journal*, 37(1), 1-12.

- Baah, C., Govender, I., & Subramaniam, P.R. (2024). Enhancing learning engagement: A study on gamification's influence on motivation and cognitive load. *Education Sciences*, 14, 1115. <https://doi.org/10.3390/educsci14101115>
- Bandura, A. (1971). *Social Learning Theory*. General Learning Press.
- Bicen, H., & Kocakoyun, S. (2018). Perceptions of students for gamification approach: Kahoot as a case study. *International Journal of Emerging Technologies in Learning (IJET)*, 13(2), 72–93. <https://doi.org/10.3991/ijet.v13i02.7467>
- Chan, S., & Lo, N. (2024). Enhancing EFL/ESL instruction through gamification: A comprehensive review of empirical evidence. *Frontiers in Education*, 9, 1-21. <https://doi.org/10.3389/feduc.2024.1395155>
- Cherry, K. (2025, December 1). *How Social Learning Theory Works*. <https://www.verywellmind.com/social-learning-theory-2795074>
- Clugston, B. (2025, May 21). *Advantages and disadvantages of AI in education*. University Canada West. <https://www.ucanwest.ca/blog/education-careers-tips/advantages-and-disadvantages-of-ai-in-education/>
- Cooper, T. C. (1999). Processing of idioms by L2 learners of English. *TESOL Quarterly*, 33(2), 233-262. <https://doi.org/10.2307/3587719>
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. Harper and Row.
- Dokchandra, D., & Boonnoon, S. (2023). An investigation of Thai university EFL students' ability to notice English idiomatic expressions. *Arab World English Journal*, 14(4), 269-282. <https://dx.doi.org/10.24093/awej/vol14no4.16>
- Fernando, C. (1996). *Idioms and idiomaticity*. Oxford University Press.
- Flavel, L., & Flavel, R. H. (2000). *Dictionary of idioms and their origins*. Kyle Cathie Ltd.
- Fuchs, K. (2023). Challenges with gamification in higher education: A narrative review with implications for educators and policymakers. *International Journal of Changes in Education* 1(1), 51-56. <https://doi.org/10.47852/bonviewIJCE32021604>
- Gramley, S., & Pätzold, M. (2003). *A survey of modern English*. Routledge.
- Grant, L. E., & Bauer, L. (2004). Criteria for re-defining idioms: Are we barking up the wrong tree? *Applied Linguistics*, 25(1), 38-61. <https://doi.org/10.1093/applin/25.1.38>
- Hamari, J., Koivisto, J., & Sarsa, H. (2014). *Does gamification work?: A literature review of empirical studies on gamification*. In 2014 47th Hawaii International Conference on System Sciences (pp. 3025-3034).

- Howarth, P. (1998). Phraseology and second Language proficiency. *Applied Linguistics*, 19(1), 24-44. <https://doi.org/10.1093/applin/19.1.24>
- Kantamara, P., Hallinger, P., & Jatiket, M. (2006). Scaling-up educational reform in Thailand: Context, collaboration, networks, and change. *Planning and Changing*, 37(1), 5-23. <https://files.eric.ed.gov/fulltext/EJ756213.pdf>
- Kapp, K. M. (2012). *The gamification of learning and instruction: Game-based methods and strategies for training and education*. Pfeiffer.
- Koonin, A. V. (1970). *English Phraseology*. Theoretical Course Science.
- Kriengphan, T. (2017). *A survey of graduate students' comprehension of English idioms, difficulties in understanding and strategies used in processing English idioms*. (Master thesis). Thammasat University.
- Laksanasut, S. (2025). Gamification in ESL/EFL education: Transforming language learning and teaching through play. *TESOL and Technology Studies* 6(1), 16-29. <https://doi.org/10.48185/tts.v6i1.1562>
- Lewis, H. (2024). Teacher training in technology use: Bridging the digital divide in education. *Journal of Foreign Language Education and Technology*, 9(1), 1-2.
- Liao, X., & Noor, N. F. M. (2025). Design components of serious game based on flow theories. *Advances in Educational Technology and Psychology*, 9(3), 67-80. <https://doi.org/10.23977/aetp.2025.090311>
- Liu, D. (2003). The most frequently used spoken American English idioms: A corpus analysis and its implications. *TESOL Quarterly*, 37(4), 671-700. <https://doi.org/10.2307/3588217>
- Liu, D. (2008). *Idioms: Descriptions, comprehension, acquisition, and pedagogy*. Routledge.
- Leo, S. B., & Rajkumar, P. (2025). Enhancing idiom instruction through the gamification method. *International Journal of English and Studies (IJOES)*, 7(3), 55-58. <https://doi.org/10.47311/IJOES.2025.7.03.58>
- Makkai, A. (1972). *Idiom Structure in English*. The Hague.
- Martinez, R., & Murphy, V. A. (2011). Effect of frequency and idiomaticity on second language reading comprehension. *TESOL Quarterly*, 58(2), 267-290. <https://doi.org/10.5054/tq.2011.247708>
- Matyakhan, T., Chaowanakritsanakul, T., & Santos, J. A. L. (2024). Implementing gamification to enhance reading engagement and reading comprehension of Thai EFL university

- students. *LEARN Journal: Language Education and Acquisition Research Network*, 17(1), 121–239. <https://so04.tci-thaijo.org/index.php/LEARN/article/view/270383>
- Mehdi, S. (2024). Techniques used in teaching idioms. *Acta Globalis Humanitatis et Linguarum*, 1(2), 34-42. <https://doi.org/10.69760/aghel.01024063>
- Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6), 1017–1054. <https://doi.org/10.1111/j.1467-9620.2006.00684.x>
- Moon, R. (1998). *Fixed expressions and idioms in English: A corpus-based approach*. Oxford University Press.
- Müller, A., Son, J., Nozawa, K., & Dashtestani, R. (2017). Learning English idioms with a web-based educational game. *Journal of Educational Computing Research*, 56(6), 848-865. <https://doi.org/10.1177/0735633117729292>
- Na Ranong, S. (2014). Idiom comprehension and processing: The case of Thai EFL learners. *Journal of English Studies*, 9, 51-97. <https://so04.tci-thaijo.org/index.php/jse/article/view/25407>
- Nilubol, K., & Sitthitikul, P. (2023). Gamification: Trends and opportunities in language teaching and learning practices. *PASAA Journal*, 67, 378-400. <https://doi.org/10.58837/CHULA.PASAA.67.1.13>
- O'Brien, K., & Pitera, J. (2019). Gamifying instruction and engaging students with breakout. *Journal of Educational Technology Systems*, 48(2), 192–212. <https://doi.org/10.1177/0047239519877165>
- Panda, R. (2024). Gamification and educational technology in teacher training: Opportunities and challenges. *International Journal of Research Publication and Reviews* 5(9), 701-711. <https://doi.org/10.55248/gengpi.5.0924.2503>
- Panmei, B., & Waluyo, B. (2023). The pedagogical use of gamification in English vocabulary training and learning in higher education. *Educ. Sci.*, 13(24), 1-22. <https://doi.org/10.3390/educsci13010024>
- Rafatbakhsh, E., & Ahmadi, A. (2019). A thematic corpus-based study of idioms in the Corpus of Contemporary American English. *Asian-Pacific Journal of Second and Foreign Language Education*, 4(11), 1-21. <https://doi.org/10.1186/s40862-019-0076-4>
- RahmtAllah, E. A. E. (2024). EFL learners' comprehension of English idioms at the university level. *Journal of Education and Practice*, 15(6), 24-33.

<https://doi.org/10.7176/JEP/15-6-03>

Ratsamee, S., Chomchaiya, C., & Jitsupa, J. (2025). Use of gamification to promote spelling skills of grade 3 students. *Journal of English Language and Linguistics*, 6(2), 134–149.

<https://doi.org/10.62819/jel.2025.1013>

Rodjanagosol, K. (2024). Gamification's role in enhancing vocabulary acquisition for adult English learners. *Journal of Asian Language Teaching and Learning*, 5(2), 58–68.

<https://so10.tci-thaijo.org/index.php/jote/article/view/1412>

Rofiah, N. L., & Waluyo, B. (2024). Effects of gamified grammar and vocabulary learning in an English course on EFL students in Thailand. *Teaching English with Technology*, 24(2), 22-46. <https://doi.org/10.56297/vaca6841/LRDX3699/DJL1101>

Rungsripattanaporn, S., & Na Ranong, S. (2018). Exploring L2 idiom comprehension: A case of Thai EFL learners. *PASAA PARITAT Journal*, 33, 127-156.

https://www.culi.chula.ac.th/Images/asset/pasaa_paritat_journal/file-7-65-fo26me618128.pdf

Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, 61. <https://doi.org/10.1016/j.cedpsych.2020.101860>

Sailer, M., & Homner, L. (2020). The gamification of learning: A meta-analysis. *Educational Psychology Review*, 32, 77-112. <https://doi.org/10.1007/s10648-019-09498-w>

Salmanova, S. (2025). Gamification and AI in language learning – A new era of digital education. *Acta Globalis Humanitatis et Linguarum*, 2(1), 262-269.

<https://doi.org/10.69760/aghel.02500134>

Šarić, A. (2022). A study of university students' idiomatic competence. *European Journal of Education*, 5(1), 102-113. <https://doi.org/10.26417/270tsv35>

Sevara, M. (2025). The role of digital tools in teaching English idioms to B2 students. *International Multidisciplinary Journal for Research & Development*, 12(5), 169-175.

<https://www.ijmrd.in/index.php/imjrd/article/view/3054>

Simpson, R., & Mendis, D. (2003). A corpus-based study of idioms in academic speech. *TESOL Quarterly*, 37(3), 419-441. <https://doi.org/10.2307/3588398>

Skinner, B. F. (1974). *About behaviorism*. Alfred A. Knopf.

Strakšiene, M. (2009). Analysis of idiom translation strategies from English into Lithuanian. *Studies about Language*, 13-20.

- Sweller, J. (1994). Cognitive load theory, learning difficulty, and instructional design. *Learning and Instruction*, 4, 295-312. [https://doi.org/10.1016/0959-4752\(94\)90003-5](https://doi.org/10.1016/0959-4752(94)90003-5)
- Sweller, J., van Merriënboer, J. J. G., & Paas, F. (2019). Cognitive architecture and instructional design: 20 years later. *Educational Psychology Review*, 31(2), 261–292. <https://doi.org/10.1007/s10648-019-09465-5>
- Temel, T., & Cesur, K. (2024). The effect of gamification with web 2.0 tools on EFL learners' motivation and academic achievement in online learning environments. *Sage Open*, 14(2), 1-19. <https://doi.org/10.1177/21582440241247928>
- Thakur, K. (2024, August 20). *Theory of gamification and its effect*. <https://www.nudgenow.com/blogs/theory-of-gamification-learning-effect>
- Vathanalaoha, K. (2022). Effects of gamification in English language learning: The implementation of Winner English in secondary education in Thailand. *LEARN Journal: Language Education and Acquisition Research Network*, 15(2), 830–857. <https://so04.tci-thaijo.org/index.php/LEARN/article/view/259953>
- Wright, J. (2002). *Idioms Organiser: Organised by metaphor, topic, and keyword*. Language Teaching Publications.
- Wulan, D. R., Nainggolan, D. M., Hidayat, Y., Rohman, T., & Fiyul, A. Y. (2024). Exploring the Benefits and Challenges of Gamification in Enhancing Student Learning Outcomes. *Global International Journal of Innovative Research*, 2(7), 1657-1674. <https://global-us.mellbaou.com/index.php/global/article/view/238>
- Zeena, O. (2024). *Using gamification to enhance development: How game elements can contribute to sustainable development in the Global South*. Busara Groundwork.
- Zhang, S., & Hasim, Z. (2023). Gamification in EFL/ESL instruction: A systematic review of empirical research. *Frontiers in Psychology*, 13, 1-12. <https://doi.org/10.3389/fpsyg.2022.1030790>
- Zimik, H. R. Nafis, Khan, N. M., & Waluyo, B. (2024). Game on! The effectiveness of gamified approaches in Thai higher education. *International Journal of Information and Education Technology*, 14(10), 1461-1470. <https://doi.org/10.18178/ijiet.2024.14.10.2177>