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Gamification in English Language Teaching and Learning: A Systematic Review of Studies

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Gamification in English Language Teaching and Learning: A Systematic Review of Studies

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ABSTRACT

Recent advances in technology have led to a need to explore the up-to-date research on gamification. This study presents a systematic review of empirical research published between 2020 and 2025 on gamification in teaching/learning English as a second/foreign language in four peer-reviewed journals. Content analysis revealed that the most frequently used research design was the mixed methods quasi-experimental design. Regarding the areas of focus, three themes emerged: language skills, game elements, and psychological factors. The most frequently investigated skill was vocabulary, followed by reading, listening, grammar, pronunciation, pragmatics, and collocations. Motivation was the most commonly explored affective construct, followed by engagement, anxiety, and flow state. Points and scores were the most frequently investigated game elements, followed by immediate feedback, leaderboards, badges, rewards, narratives, and avatars. Overall, the findings suggest that gamification is an effective method for enhancing linguistic and affective gains. Therefore, this review has important implications for teachers and learners in EFL contexts.

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As the use of game design elements and techniques in non-game contexts enhances motivation (Deterding et al., 2011, p. 2; Werbach & Hunter, 2012), gamification increases learners' academic performance, motivation, and engagement through game elements such as points, levels, badges, and progress bars (Goethe, 2019; Qiao et al., 2022; Sailer et al., 2017). However, many of the educational contexts still use traditional methods, which are far from satisfying the basic psychological needs of learners and teachers, which decreases their intrinsic motivation and well-being (Ryan & Deci, 2020). Moreover, the use of gamification remains rather limited in most countries, and teachers lack experience with the use of digital games in the classroom (Blume, 2020). Gamified learning environments can be classified into two contexts: non-technological versus technological gamified learning (Goethe, 2019). In this regard, gamification, in its broadest sense, includes both digital and non-digital gamification. Digital gamification refers to the use of "online tools or platforms instead of traditional ones" (He et al., 2023, p. 183). Given the role of technology in transforming language education, this review only includes the studies that were conducted in a digital environment.

One major construct with regard to gamification is motivation. In this regard, the Self-Determination Theory (SDT) (Deci & Ryan, 1985; Ryan & Deci, 2000b) focuses on the interplay between intrinsic motivation, which refers to "doing something because it is inherently interesting or enjoyable", and extrinsic motivation, which refers to "doing something because it leads to a separable outcome" such as rewards and incentives (Ryan & Deci, 2000a, p. 55). SDT suggests that there are certain needs of humans that, if met, enhance their intrinsic and internalized extrinsic motivation (Ryan & Deci, 2020). These are the need for competence, or the sense of being able to do a task with optimal challenges successfully, the need for autonomy, or the sense of having control over one's own actions without any external influences, and the need for relatedness, or the sense of being connected with and valued by others (Baah et al., 2023; Ryan & Deci, 2000b; Ryan & Deci, 2002). Previous studies found that gamification, if implemented successfully, can increase learners' motivation and learning performance and satisfy their basic psychological needs for autonomy, competence, and relatedness (Ede, 2022; Sailer et al., 2017; Zainuddin, 2018).

Another influential theory behind gamification is the Flow Theory proposed by Csikszentmihalyi (1975), which suggests that learners engage in a flow state and have optimal experiences when the challenges of a task and their skills are balanced, and when they have an intense concentration in which they lose track of time and consciousness. For an activity to engage learners in the flow state, it must be intrinsically rewarding, have a clear set of goals, provide immediate feedback, and adapt challenges based on the learner's skills (Csikszentmihalyi, 1975; 1990). In this regard, games provide learners with a great opportunity to experience flow (Csikszentmihalyi, 1998). As games have exciting and engaging elements, they provide learners with "the perfect balance between boredom and anxiety" (Ham, 2020, p. 42). Moreover, gamification increases concentration and engagement by providing a balance between challenges and skills, enabling learners to experience flow (Foroutan Far & Taghizadeh, 2022).

Each game consists of game elements, which are specific characteristics that can be applied in gamification (Goethe, 2019; Werbach & Hunter, 2012). Combined with game aesthetics such as visuals and audio, game elements provide learners with engaging experiences (Goethe, 2019). Such game elements as points, badges, and leaderboards engage learners in the gamified experience (Werbach & Hunter, 2012). From a Sociocultural Theory perspective (Vygotsky, 1978), game elements such as feedback, hints, glowing choices, and tips can act as more knowledgeable others who provide scaffolding for learners within their Zone of Proximal Development to complete certain tasks that they would not be able to do on their own (Klock et al., 2020; Krath et al., 2021).

The use of gamification in the EFL/ESL context has been widely investigated. Previous studies found that gamification enhances learners' language skills, boosts their motivation and engagement, satisfies their basic psychological needs, scaffolds them, and is perceived well by learners (Avila & Fonseca, 2021; Dehganzadeh & Dehganzadeh, 2020; Foroutan Far & Taghizadeh,

2022; Qiao et al., 2024; Sailer et al., 2017; Shortt et al., 2021). Although a number of studies have been carried out on gamification in EFL/ESL contexts, there is still a need for further contributions as emerging technologies have also transformed how gamification is applied in educational contexts and what outcomes it yields. Therefore, this study seeks to contribute to the growing literature by reviewing the up-to-date gamification research in the field of EFL/ESL teaching and learning. With this in mind, this review aims to investigate the research methodologies employed by the studies and the areas of focus that the studies explore. Therefore, the study seeks to address the following research questions:

1. What are the predominant research designs and methodologies employed in recent studies on gamified English language teaching and learning?
2. Which areas of focus are most frequently investigated in recent studies on gamified English language teaching and learning?

2. Method

This study aims to review the existing research on gamification in terms of methodology and focal areas of research. With this in mind, the researcher selected the prominent journals in the field of English as a second or foreign language. These journals were purposefully selected based on the following inclusion criteria:

- Indexing: journals that are indexed in the Social Sciences Citation Index (SSCI) or Emerging Sciences Citation Index (ESCI)
- Quartile: journals that are ranked in the first quartile (Q1)
- Scope: journals that focus on technology use in English as a second or foreign language contexts

As a result, the researcher identified four journals for the review as follows: *Computer Assisted Language Learning*, *CALICO Journal*, *Language Learning and Technology*, and *ReCALL*. In order to select potential empirical studies to be included in this review, the researcher searched the literature from these journals. With regard to the time frame, this review only included articles published between 2020 and 2025 in order to capture the most relevant and up-to-date literature in gamification. As can be seen from Table 1, the majority of the studies in this review were conducted in 2024 (n=8), which was followed by 2023 (n=7). The search terms used in this study included various combinations of "gamification", "gamified", "EFL", "ESL", "L2", "English", "foreign language", "second language", "teaching", and "learning", and the studies that included these terms in their titles, abstracts, and/or keywords were taken into consideration.

Table 1
Chronology of Research on Gamification

Publication year	Number of studies in this review
2025	2
2024	8
2023	7
2022	2
2020	1

In order to refine the results and select the most relevant and high-quality studies, certain inclusion and exclusion criteria were employed.

2.1. Inclusion Criteria

- Only articles published between 2020 and 2025 were selected
- Only articles that were published in English were selected
- Only empirical studies that involved original data collection and analysis were included
- Only articles that used gamification for teaching/learning English as a second/foreign language were included
- Only articles that used digital gamification were included
- There were no exclusion criteria regarding the methodology of the studies, including quantitative, qualitative, and mixed methods

2.2. Exclusion Criteria

Studies that did not meet at least one of the above criteria were excluded from the scope of the review. In other words, anything outside the scope of the inclusion criteria constituted exclusion criteria. With regard to the types of publications, the following exclusion criteria were applied:

- Conference proceedings, books, book chapters, theses and dissertations, literature reviews, book reviews, learning technology reviews, calls for papers, letters to the editor, and secondary data analysis were not included in the study.

Table 2 illustrates the initial number of articles found after filters with regard to time frame were applied.

Table 2
Articles Included in the Study

Journal	Articles Found	Articles Included	Reasons for Exclusion
CALL	36	12	Not focused on the English language (n=1) Not an empirical study (n=9) Off-topic (n=14)
CALICO	12	2	Not an empirical study (n=9) Off-topic (n=1)
LLT	26	5	Not an empirical study (n=8) Not focused on the English language (n=2) Off-topic (n=11)
ReCALL	6	1	Not an empirical study (n=5)

2.3. Selected Studies

After the initial search with the terms, the researcher went through the title, abstract, keywords, and, if necessary, the full-text version of the studies to decide whether to include them in the review. After employing the inclusion and exclusion criteria, a total of 20 articles remained to be included in the review. As can be seen in Table 2, the majority of the selected studies were published in the CALL Journal, followed by LLT (n=5), CALICO (n=2), and ReCALL (n=1).

2.4. Data Analysis

For data analysis, the researcher created a review of the study guidelines to organize all data in a table. This table included the names of the authors and the date, research aims, participants, data collection tools, findings/results, and implications. This enabled the researcher to take notes while reading the articles multiple times and gain a general understanding. Then, the researcher reorganized these guidelines based on the research questions. Employing content analysis, the researcher analyzed the patterns in the data. Research designs and methodologies were coded deductively based on their explicit reporting in the studies. The focal areas of research, on the other hand, were identified inductively. In other words, these emerged from the reviewed studies rather than being predetermined. To ensure consistency, emergent themes regarding the focal areas of the studies were checked by an experienced colleague in ELT.

3. Results and Discussion

The review aimed to investigate the research methodologies adopted in the studies and the focal areas of research. The first research question concerned the predominant research designs and methodologies employed in recent studies on gamified English language teaching and learning. Regarding the research methods, the researcher created a table summarizing the research methodology of the reviewed studies (see Table 3). The analysis indicated that most of the studies used mixed methods research design (n=11), followed by quantitative (n=8) and qualitative design (n=1). Moreover, most of the studies used the quasi-experimental design (n=12). Participants in the reviewed studies showed a varying spectrum, ranging from primary school students to middle

school, high school, and undergraduate students. The analysis revealed that quantitative data collection tools included pre- and post-tests, questionnaires, and scales, while qualitative data collection instruments consisted of semi-structured interviews, diaries, journal entries, video reflection, and open-ended questions. Although mixed methods studies provide deeper insights into the research problems and questions by providing both quantitative and qualitative data, conducting pure qualitative research that delves deeper into learners' experiences with gamified learning might also be worthwhile. Also, the fact that the researchers worked with learners of different ages and backgrounds across the studies indicates that gamification can be an effective tool regardless of individual differences. The fact that the studies collected data through a variety of tools also shows that their findings are triangulated and therefore more reliable and valid (Creswell & Creswell, 2018).

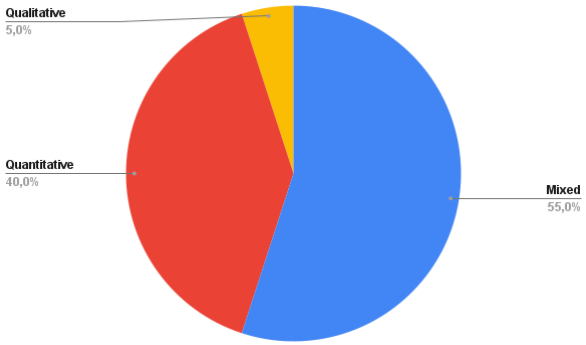

Figure 1
Distribution Percentages of Research Designs in the Reviewed Studies

Table 3
Research Methodology of the Reviewed Studies

Authors	Participants	Research Design	Data Collection Tools	Gamified Tool / Platform
Barcomb & Cardoso (2020)	11 Japanese junior high school students	One-group quasi-experimental mixed methods study	Pre- and post-tests, a written follow-up questionnaire, and user logs	A gamified course management system
Hong et al. (2022)	96 ninth-grade EFL students	Experimental quantitative study	Grammar pre- and post-tests, English learning anxiety, epistemic curiosity, and attitude toward gamification scales	A gamification platform called TipOn
Philpott & Son (2022)	89 second-year undergraduate students from four intact Intensive English classes	Quasi-experimental Mixed methods study	Language Learning Orientations Scale, Quest diaries, semi-structured interviews	A gamified digital ecosystem
Jia et al. (2023)	90 Chinese EFL university students	Quantitative experimental study	Pre-test, an immediate post-test, and two delayed post-tests of vocabulary	Augmented Reality-based GBL
Kessler et al. (2023)	59 adult learners	Mixed methods study	Post-test of various language skills and user experience survey	Babbel and Duolingo
Kessler (2023)	6 undergraduates with varying majors	Qualitative case study	Weekly e-journal entries and a final video recording reflection	Duolingo
Prados Sánchez et al. (2023)	85 fourth graders in primary education in Spain	Quasi-experimental quantitative study	Pre- and post-tests of reading comprehension and learner attitudes toward reading	Digitally gamified Tatum platform
Qiao et al. (2023)	104 Chinese seventh graders learning English	Mixed methods study	Pre-and post-tests of reading comprehension, engagement questionnaires, and interviews	A gamified morphological analysis program
Tao & Zou (2023)	80 Chinese freshmen from an international university	Mixed methods study	Kahoot! questionnaire, semi-structured interviews	Kahoot!

Table 3 (*cont'd*)

Authors	Participants	Research Design	Data Collection Tools	Gamified Tool / Platform
Taguchi (2023)	60 Chinese freshmen enrolled in English classes at a university	Single-group pre-posttest quantitative design	Recognition and production pre, immediate post, and delayed posttest of pragmatics	A digital game developed via Python
Jia et al. (2024)	48 Chinese EFL university students	Quantitative quasi-experimental research design	Pre- and post- tests of receptive and productive vocabulary	Quizlet
Jiang et al. (2024)	245 CEFR A2 level English language learners	Quantitative design	Reading and listening tests	Duolingo
Foroutan Far & Taghizadeh (2024)	75 Iranian EFL students at the B1 level	Quasi-experimental mixed methods design	Collocation knowledge pre- and post-tests, the flow questionnaire, open-ended questions, and a semi-structured interview	Digital gamification application versus a card game
Ge (2024)	180 second-year adult e-learners	Quantitative design	An online pre- and post-test of vocabulary, and two online questionnaires	A gamified platform
Liu (2024)	120 participants enrolled in a general education English course	Quasi-experimental mixed methods design	pretest, peer collaboration questionnaire, focus group interview, and the post-test	Gamified mobile learning app
Serfaty & Serrano (2024)	96 participants from an English-language international school	Quantitative experimental design	Pre- and post-tests for vocabulary productive recall and receptive recall	Quizlet
Shafiee Rad & Alipour (2024)	30 Persian-speaking intermediate English language learners	Explanatory sequential experimental mixed methods design	Vocabulary knowledge pre-, post-, and delayed post-test, motivation pre-, post-, delayed post-test, follow-up interviews	Digital escape rooms
Qiao et al. (2024)	156 7th-grade students in a secondary school in China	Quasi-experimental mixed methods design	Pre- and post-tests of morphological awareness, word reading, and reading comprehension, semi-structured interviews	Competitive/cooperative/collaborative gamification
Lee & Youn Ahn (2025)	29 Korean middle school students	Mixed methods design	Screen recordings of learner activities, learner surveys, and interviews with the learners and teachers	A virtual game-like metaverse
Zhang et al. (2025)	50 Chinese EFL university students	Experimental mixed methods design	Eye-tracker, pre-, post-, and delayed post-tests, and semi-structured interviews	An educational game developed by the researchers

The second research question aimed to identify the focus areas in the reviewed studies. The content analysis led to three distinct areas of focus: language skills, psychological factors, and game elements (see Table 3).

With regard to language skills, vocabulary emerged as the most frequently targeted skill (n=8)

(see Figure 2). This finding shows that gamification has considerable potential to increase learners' receptive and productive vocabulary knowledge. This finding is in line with previous studies, which found that gamification had a positive effect on vocabulary learning (Enayat et al., 2025; Smith et al., 2024). The next most addressed skill was reading (n=4), which was combined with comprehension tasks or morphological awareness. Previous studies also reported that gamification enhanced learners' reading proficiency (Cheng et al., 2025; Yang & Ying, 2025). Listening, grammar, pronunciation, pragmatics, and collocations were also among the skills that were investigated. Based on these findings, it can be inferred that gamification is especially effective in enhancing vocabulary and reading skills. Overall, this finding is in line with previous studies, which found that gamification has a positive effect on learners' language skills (Avila & Fonseca, 2021; Hazar, 2020; Lui, 2014; Young & Wang, 2014).

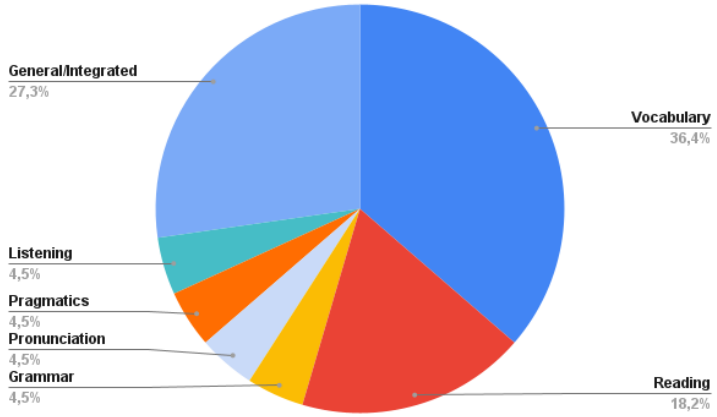

Figure 2
Distribution Percentages of Language Skills

Table 4
Focus Areas in Reviewed Studies

Authors	Language Skills	Psychological Factors	Game Elements
Barcomb & Cardoso (2020)	Pronunciation	Motivation, engagement	Points, leaderboards, badges
Hong et al. (2022)	Grammar	Epistemic curiosity, language anxiety	Gamified quiz questions, immediate feedback
Philpott & Son (2022)	General language learning	Motivation	Quest-based narrative, challenges, and feedback
Jia et al. (2023)	Academic vocabulary	Engagement	Game-based multimedia content
Kessler et al. (2023)	Reading, vocabulary	User experience, motivation	Mobile gamification features in Duolingo & Babbel
Kessler (2023)	Vocabulary, grammar	Metacognitive awareness	Mobile gamification features
Prados Sánchez et al. (2023)	Reading comprehension	Attitudes toward reading	Badges, progress bars, and leaderboard
Qiao et al. (2023)	Reading, morphological awareness	Engagement	Competition, immediate feedback
Tao & Zou (2023)	General language learning	Perception, motivation	Kahoot (real-time quiz, scores, ranking)
Taguchi (2023)	Pragmatics (requests)	Motivation	Scenario-based gameplay, consequence-based feedback
Jia et al. (2024)	Receptive and productive vocabulary	Not explicitly focused	Digital gaming with tasks and progress feedback
Jiang et al. (2024)	Reading, listening	Motivation, enjoyment	Duolingo game structure (XP, streaks, timed tasks)
Foroutan Far & Taghizadeh (2024)	Collocations	Motivation, perception, flow	Digital and non-digital (card-based) gamification
Ge (2024)	General learning engagement	Engagement, anonymity effects	Competition

Table 4 (*cont'd*)

Authors	Language Skills	Psychological Factors	Game Elements
Liu (2024)	General English	Motivation	Points, badges, levels, competition
Serfaty & Serrano (2024)	Vocabulary retention)	Not explicitly focused	Quizlet-based gamification (spacing, leaderboard)
Shafiee Rad & Alipour (2024)	Vocabulary achievement and retention	Motivation	Digital escape room, puzzles, narrative
Qiao et al. (2024)	Reading, vocabulary	Engagement	Competitive, cooperative, and collaborative game elements
Lee & Youn Ahn (2025)	General L2 communication	Motivation, learner agency, engagement	Metaverse with 3D avatars, exploration, and challenge quests
Zhang et al. (2025)	Vocabulary	Engagement	Game elements such as feedback, avatars, challenges, and scores

With regard to psychological factors, motivation (n=10) and engagement (7) were the most frequently addressed affective constructs (see Figure 3). Others included anxiety, a sense of flow, curiosity, metacognition, and enjoyment. This finding is in line with previous research, which found that gamification enhances motivation and engagement (Avila & Fonseca, 2021; Cheng et al., 2025; Liu, 2025; Predyasmara et al., 2022; Sailer et al., 2017; Shen et al., 2024; Zainuddin, 2018).

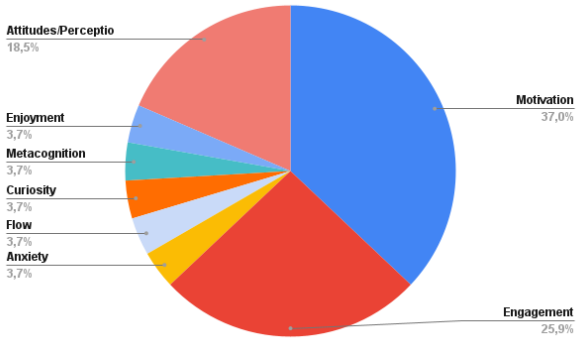

Figure 3
Distribution Percentages of Psychological Factors

With regard to game elements, the analysis revealed that a variety of elements were used (see Figure 4). Among these, the most frequently used ones were points and scores (n=10), followed by immediate feedback (n=6), leaderboards (n=5), badges/rewards (n=4), competition (n=4), collaboration (n=3), narrative/quests (n=3), and so forth. This finding is in line with the systematic review of empirical research on gamification in EFL/ESL instruction conducted by Zhang and Hasim (2023), which found that the gamified systems were mostly points-based and that the most frequently used game elements in the reviewed studies were feedback, points, quizzes, badges, and leaderboards. As Sailer et al. (2017) also suggested, combining various game design elements yields effective learning outcomes.

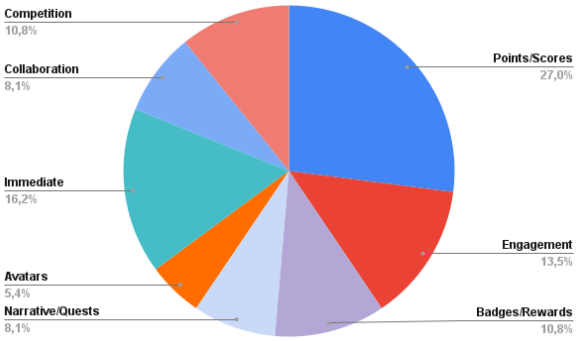

Figure 4
Distribution Percentages of Game Elements

4. Conclusion

This systematic review provided an overview of the current state of gamification in teaching/learning English as a second/foreign language. By reviewing 20 empirical studies that were selected based on pre-determined inclusion criteria, this research investigated the research methodologies employed by the studies and their areas of focus. It was revealed that most of the studies employed a mixed-methods research design. The areas of focus across the studies led to three umbrella themes: language skills, psychological factors, and game elements. Across the reviewed studies, the most addressed language skill was vocabulary, with some studies specifically testing receptive and productive vocabulary knowledge and vocabulary recall and

recognition. The second most frequently addressed skill was reading, with some studies focusing on comprehension tasks and morphological awareness. Other skills included listening, grammar, pronunciation, pragmatics, and collocations. Among the psychological factors across the studies, motivation was the most commonly investigated construct, which was followed by engagement. Other constructs included anxiety and the sense of flow. With regard to game elements, points and scores were the most commonly employed ones, followed by other elements.

The reviewed studies show the pedagogical potential of gamification as an effective tool that enhances vocabulary learning, reading comprehension, motivation, and engagement. The fact that the studies were conducted with various groups of learners with different ages and educational backgrounds shows that integrating gamification in different stages of education can result in enhanced learning outcomes. Therefore, it is suggested that policymakers, curriculum designers, and material developers integrate game elements to foster language learning. In this regard, it would be worthwhile to embed gamified activities into classroom instruction. It is also recommended that learners with anxiety be provided with opportunities to engage in gamified language learning, given that it significantly increases learners' motivation and engagement, thus reducing their anxiety. In order to increase student participation, different types of gamification, as investigated by Qiao et al. (2024), should be implemented to foster collaboration and healthy levels of cooperation among learners. Another important implication is that the gamified tasks should be balanced with learners' actual skills in order to engage them in the flow state.

With regard to future research, it is recommended that more studies be conducted on speaking, listening, and writing skills, which remain underrepresented in the related literature as compared to vocabulary and reading skills. Further studies could also use more longitudinal designs in order to evaluate the effectiveness of gamification in the long term. Finally, the integration of emerging technologies such as generative AI into gamification would be an interesting area of research.

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