

Iraqi EFL Teachers' Attitudes toward Digital-game Enhanced Language Learning

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ABSTRACT

In the 21st century, many emergent technologies have entered the field of English language Teaching, and after being evolved, they have changed the learning and teaching process. However, for most educators, implementing these new technologies has been challenging, especially when digital-native learners entered the classrooms. These language learners are different from previous ones in that they prefer varied learning experiences, which contain engagement, challenge, motivation, and creativity. Since teachers tend to teach conventionally in the chalk-and-talk method, creating such a learning environment is not an easy task for them. To tackle this issue, games, especially digital games, were introduced to the field of language teaching, and two approaches, namely Gamification and Digital Game-Enhanced Language Learning (DGELL), have been used based on the teachers' goals of teaching. However, although digital games have been witnessed as a popular tool for leisure and education, their use in language teaching, especially in Iraq, remains low. This study was carried out to understand the attitudes of EFL teachers regarding DGELL. To reach these aims, an explanatory sequential mixed-method design was used as the method of study. The questionnaire for EFL teachers' attitudes of DGELL (Hsu et al., 2013) was modified and administered. It was used to assess 208 Iraqi EFL teachers' perceptions of DGELL. For the qualitative phase, a semi-structured interview was utilized. Among 208 participants who had filled out both questionnaires, 9 were selected and interviewed. The findings revealed that most Iraqi EFL teachers have slightly positive perceptions toward using digital games in their classes. However, when it comes to the actual use of digital games in their classes, they declare that they do not possess enough pedagogical knowledge and competence to use digital games in teaching English. This study's findings may have several implications for stakeholders, educational game designers, workshop holders, and EFL teachers

Keywords: Digital Game-Enhanced Learning, Attitudes, Iraqi EFL teachers..

INTRODUCTION

With the advent of the information age, technology has become part of every aspect of our lives (Habebe et al., 2025). Çakmak (2019) states that this incredibly fast development has led to new ways of learning based on existing learning theories and has helped to develop a learner-centered and individualized way of learning. He adds that, in fact, learning with the help of new technologies can happen anywhere and anytime. In addition, Çakmak states that it is now possible for people to build their knowledge based on their own practice and experiences, making the learning process flexible in terms of interests, skills, and preferences. It is also worth noting that technology has profoundly impacted language learning and teaching practices in foreign language instruction throughout the globe over the past two decades. Computer-assisted language learning (CALL) is one approach that has been proposed to incorporate these technologies into language learning. This approach is defined as a progression where the student uses the computer to develop their language skills (Beatty, 2010; Habebe et al., 2025; Shqair, 2023). Toffoli (2020) states that CALL is nowadays a well-established approach that has been researched extensively, and many subcategories have been introduced for it, such as Game-Based Language Learning (GBLL) and Mobile-Assisted Language Learning (MALL).

Another subcategory of CALL is gamification, which is mostly confused with GBL. In fact, as Reinhardt (2019) concludes, there is a difference between GBL and gamification from the learner-players' perspective; the former is when a lesson acts similarly to a game, while the latter is when a game itself acts as a lesson.

As mentioned earlier, one of the main subcategories of CALL is GBL, also known as DGBL due to the digital nature of CALL games. In other words, DGBL stands for Digital Game Language Learning. Pettersson (2018) notes that there has been an increase in research on the use of digital games in the field of English language teaching (ELT). Regarding the importance of digital games, Saputra et al. (2021) argue that English students and teachers should consider digital games as useful tools because these games not only help them relax and have fun but also encourage students to learn their language in communicative and innovative ways. Furthermore, Alyaz and Genc (2018) also conclude that within CALL, digital games are one of the basic components, like traditional games, that are part of Second Language Education (SLA). Nevertheless, implementing digital games in language teaching can be challenging because of technical, financial, instructional, and sociological limitations (Alyaz & Genc, 2018).

Review of the Literature

Research has shown that approximately one-fifth of the world's population plays digital games daily (Kim, 2015; Ahmed et al., 2023). DeHaan (2019) concludes that the use of digital games in language learning goes back more than three decades, and the interest in their application is growing. It was also found that players of digital games are motivated to learn other players' languages to communicate better for interpersonal interactions and in-game cooperation.

Regarding the advantages of Digital Game Enhanced Language learning (DGELL), Hart et al. (2020) state that, in DGELL, both extrinsic motivational and intrinsic components can be integrated to create an atmosphere in which players are more motivated to engage in the required tasks. For instance, in a video game called *The Sims*, the player can control everything (autonomy). In another game called *Farmville*, the player communicates with other players and experiences many social interactions (relatedness). Both relatedness and autonomy used in these games are the essential elements of intrinsic motivations that encourage millions of people to experience these games (Deterding et al., 2011; Tawafak, 2023). Research (Lee & Hammer, 2011; Richter et al., 2015) has also shown that digital Game-Enhanced learning can motivate Students, and as a result, they can build necessary skills successfully.

Behnamnia et al. (2020) state that using digital games in education increases students' learning levels and improves creative thinking. They also state that digital games can help enhance students' social and personal skills, and they add that if the selected game is entertaining and fun, the learners will show more desire for it. The key is that parents and teachers' mediation must be in a way that helps students think, use, and access digital games. Also, it is notable that parents and teachers' past beliefs, values, and experiences significantly impact learners' interactions with digital games.

As Osman and Rabu (2020) state, the research on Digital Game-Enhanced Language Learning can be categorized into two categories. The first category is Language Literacy Skills and DGELL, which includes listening, speaking, reading, writing skills, vocabulary acquisition, and language retention. The second category is Learning Attitudes and DGELL, and it includes engagement, achievement, enjoyment, perception, confidence, and motivation. For effective teaching, improving the second category is of high importance, and as Rahimi and Yadollahi (2011, as cited in Osman, 2020) state, Learners' Learning Attitude is one of the main factors towards an effective CALL. Therefore, it is apparent that Learning Attitude has an important impact on learning efficiency and ultimately affects language literacy (Osman, 2020). Furthermore, Palacios-Hidalgo and Huertas-Abril (2022) conclude that the successful integration of digital games in English language learning does not depend on the game itself but on learners' and teachers' awareness and perception as well. Thus, for successful integration, Reinders & Sundqvist (2020) state that it is important to know the teachers' and students' perceptions of the use of digital games in English teaching and learning.

As DeHaan (2019) asserts, most of the literature in the field of ELT focuses on Game-Enhanced Language Learning, which involves learners playing games and practicing a language independently, whether outside or inside the class. DeHann (2019) adds that Game-Enhanced teaching is not defined clearly, and there are very few empirical studies with high-quality explanations and results in this regard. Another point worth mentioning is that, as Miller and Hegelheimer (2006) state, the teacher's role is vital, and digital games can never replace ESL practitioners.

As the 20th century progressed, new avenues for education emerged, and technology continued to play an important role. These strategies have been developed based on the needs, environments, and skills of 21st-century learners. This 21st-century learner is called the "digital native." According to Prensky (2001), a digital native learns and processes information differently. Learners of this generation are said to be "immersed in technology,"

constantly interacting with and learning via gadgets such as video game consoles, personal computers, digital music players, video cameras, and mobile phones. The digital native belongs to the next generation and, in many cases, is labeled as a "millennial" (Hsu et al., 2020). According to Mellati et al. (2022), the digital native wants to be engaged by the director and is expected to create and consume. Although teachers are aware of the importance of integrating technology, especially digital games, the adoption of technology in EFL seems to be slower than in other subjects (Fernández-Batanero, 2022). This may be due to a lack of knowledge about the integration of games into educational practice (Blume, 2019; Mohammad-Salehi & Kazemian, 2024).

Studies have shown that learning a new target language is demanding. Furthermore, Kocaman and Cumaoglu (2014) conclude that communicating using a second language, which is a new language, is stressful in many parts of the world. Learning this language takes a lot of time and is considered a complex process that can be caused by several factors, such as learning styles and socio-cultural aspects (Shah, 2015), anxiety (Reinhardt, 2017), negative attitudes, and learners' ability (List, 2019). Therefore, language learners must be given a variety of tasks so that they learn to understand the new language more effectively (Tour, 2017). In short, learning a foreign language through active learning methods is more productive and useful compared to old learning methods and methods (Ali, 2024; Tondeur, 2020). Blume (2020) argues that computer-assisted language learning (CALL) is one approach that can be used to engage language learners in 21st-century classrooms. He also adds that although CALL has been widely researched, some EFL teachers are still reluctant to adopt new technologies and use them in their lessons. Today, especially after the outbreak of Covid-19, it is clear to everyone that teaching without technology is somehow impossible

The two main subcategories of CALL are Gaming and Game-Based Language Learning. Fernández-Batanero et al. (2022) agree that these two approaches are the best strategies that can be used to teach a new language to 21st-century learners. However, he claims that it is not easy to design games or use gamified learning without a comprehensive understanding of these approaches. In her research, Figueroa-Flores emphasized the urgent need to investigate the effects and experiences of using these approaches for digital natives.

Digital game-enhanced learning (DGELL), a subset of game-enhanced language learning, is a recently explored approach to language education. This approach focuses on the use of digital games, mobile and non-mobile, in language learning and teaching to increase student motivation and engagement. In 2020, after the outbreak of Covid-19, Gao et al. (2020) found that there was hype about using DGELL in language classes. They predicted that more people would willingly pay attention to this approach in their research and teaching practice in the upcoming years. However, most of the research on DGELL to date has been on the effects of this approach on students' language learning and progress, and to the best of my knowledge, few studies have investigated EFL teachers' perceptions and literacy of using this approach. This is in line with the study done by Hung et al. (2018), in which they stated that since that time, very few studies had been done on EFL teachers' DGBLL use and its benefits for them. In addition, Alyaz and Genc (2018) also emphasize that before their study, the main body of research on DGELL was mainly on students, not on teachers. From their study, it can be inferred that positive, uncertain, and negative attitudes have been conveyed in different previous studies regarding teachers' perspectives toward DGELL in non-Iraqi contexts. As far as the literature shows, not many studies in the Iraqi context have been conducted on EFL teachers' perceptions of DGELL and their literacy of digital games. To this end, this study will investigate Iraqi EFL teachers' attitudes towards DGELL and their digital familiarity amidst Covid-19 and post-Covid-19 circumstances, in which using games is now a MUST for them.

Method

Participants

The researcher employed convenience sampling to get data from a substantial sample of students and teachers in both school and university settings. There are 208 school instructors (102 male and 104 female) participating in this study. The selection of participants was based on the schools and universities that were accessible in Baghdad. The participants displayed a diverse array of demographic attributes, encompassing age and background. The participants in the teaching profession had a wide variety of experience, varying from three years to more than 20 years, and held academic qualifications such as Bachelor of Arts (BA), Master of Arts (MA), and Doctor of Philosophy (PhD).

Instruments

Hsu et al. (2013) created the Acceptance of Digital Game-Based Learning (ADGBL) survey to evaluate instructors' willingness to adopt game-based learning. The ADGBL demonstrated high reliability and validity, accounting for 81% of the total variance. The researchers stated that the Cronbach alpha for the Experience with Games component was 0.93, and the overall reliability coefficient was 0.96 (Hsu et al., 2013). The current study utilized all five survey items that assess Experience with Games in their original format, such as "I would describe myself as a gamer" and "Compared to people of my age, I play a lot of video games." To ensure ease of

administration and accurate data collection, we utilized Google Forms to administer this survey. The survey was given to participants using a five-point Likert-type scale, where 1 represents "Strongly Disagree," 2 represents "Disagree," 3 represents "No Opinion," 4 represents "Agree," and 5 represents "Strongly Agree."

To validate the study findings and incorporate the acquired data, a semi-structured interview was utilized. During semi-structured interviews, in addition to drafting a set of predefined questions, the researcher will also allocate time for discussing any issues that the respondents bring up (Palacios-Hidalgo & Huertas-Abril, 2022). Collecting interview data from several schools and institutions in Iraq necessitated a substantial time investment. For this study, a sample of 12 teachers was randomly selected from different groups to conduct interviews. The participants were assured that their views would be kept confidential and anonymous. Furthermore, to address ethical considerations in the study, all participants were clearly notified of their right to terminate the interview at any given moment. Furthermore, the interviewer obtained consent from all the interviewees to capture their voices on a recording.

Procedure and Data Analysis

The main research objectives were addressed using a mixed-methods design. The study commenced by distributing questionnaires to the teacher participants. Participants were directed to fill out the surveys within a time limit of around 30 minutes. Prior to commencing the study, all participants received a comprehensive elucidation of the research objectives. The online questionnaire was created utilizing the Google Docs platform to enhance administrative simplicity. Subsequently, the online survey was transformed into a booklet questionnaire format and sent to participants through various online groups and channels, such as WhatsApp and Telegram. The participants were instructed to fill out the initial portion of the booklet, which inquired about their personal information, including gender, age, educational history, and teaching tenure, before advancing to the items on the scale. The respondents were also provided with the guarantee that their information would be kept confidential and utilized solely for research objectives.

After administering the questionnaire, the next phase in the research process involved conducting a semi-structured interview. The study selected interview candidates until the point of theoretical data saturation was reached. Put simply, the researchers determined that collecting further data would not yield any novel insights. The participants for the interview were selected based on their voluntary participation to create the most favorable conditions for conducting the interview. During the interview, meticulous consideration was given to determining the appropriate timetable and location to acquire more reliable data. Due to the challenges associated with reaching out to respondents during their chosen time slots.

After collecting the relevant data, we used the statistical package for social sciences (SPSS 26) to perform the necessary statistical analyses. At first, the distribution normality was assessed using the Kolmogorov-Smirnov test (K-S test), and the reliability of the data was verified using Cronbach alpha. Subsequently, a sequence of descriptive analyses was conducted using the scale. When examining the research question that sought to identify the primary barriers to implementing LCE, the data was assessed for the averages, variations, frequencies, and proportions of all the statements in the questionnaire.

Following the completion of the previous quantitative phase, the data obtained during the interview phase were transcribed, and a thematic analysis was conducted on the participants' responses. The objective of this study was to identify and analyze the primary themes that arose from the perspectives of the participants. The interviews produced qualitative data, which were transcribed, meticulously examined, and analyzed using thematic analysis. Howland et al. (2012) assert that qualitative research is complex and varied, with theme analysis being the prevailing approach for examining data gathered through numerous approaches. This analysis method is employed to detect, investigate, and reveal patterns within information.

Results

Quantitative Analysis

The tabulated data for the cumulative scores of the survey are displayed in Table 1. The table shows that the Cronbach alpha value is 0.86, suggesting a prominent level of internal consistency in the responses to the questionnaire items. Furthermore, the KS test produced values of 0.04, showing that the collected data conforms to a normal distribution for the scale.

Table 1

Descriptive statistics of both scales

	Minimum	Maximum	Mean	SD	Alpha	KS Sig.
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ADGBL Scale	1.25	5	3.22	1.05	0.86	0.04
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To find a possible relationship between two scales, a set of Pearson product-moment correlation was conducted. The results (Table 2) indicate that there is a moderate, but significant, relationship between teachers' ADGBL and TPACK ($r=0.56, p<0.01$). It generally means that EFL teachers more involved in ADGBL enjoy higher levels of TPACK.

Table 2

Correlation between TPACK and ADGBL

	ADGBL
TPACK	0.56*

* Two-tailed, significant at the 0.01 level.

Qualitative analysis

In an era where technology increasingly shapes educational practices, Digital Game-Enhanced Learning (DGEL) has emerged as a dynamic tool for engaging students and enriching classroom experiences. By incorporating digital games into the curriculum, educators aim to leverage the interactive and motivational aspects of gaming to enhance learning outcomes. This innovative approach aligns educational content with game mechanics to create immersive, interactive learning environments that capture students' interest and foster deeper understanding.

As educational institutions and technology continue to evolve, understanding teachers' attitudes toward DGEL is crucial. Their perspectives provide valuable insights into how digital games are integrated into teaching, the benefits observed, and the challenges encountered. Teachers' experiences with DGEL can shed light on how these tools influence student engagement, learning outcomes, and classroom dynamics.

This exploration into teachers' attitudes toward DGEL seeks to uncover their motivations for using game-based approaches, the practical implications of these methods, and the support they need to maximize their effectiveness. By examining these attitudes, we can better understand the impact of digital games on modern education and identify ways to support educators in harnessing this innovative approach to learning.

Here are the main themes emerging from teachers' views on DGEL, capturing their experiences, benefits, challenges, and perspectives on the future of this approach:

Increased Student Engagement

Interactive Learning: Teachers consistently highlight that digital games can significantly boost student engagement. Games provide interactive experiences that make learning more dynamic and enjoyable, often leading to increased participation and motivation among students.

T1: I'm quite positive about it. Digital games can make learning more interactive and fun. They help students engage with the material in ways that traditional methods sometimes can't. I've seen kids who are usually disinterested in math become enthusiastic when games are involved.

Enhanced Motivation: Games often transform traditional learning activities into exciting challenges, which can be particularly effective in motivating students who might otherwise be disengaged or disinterested.

T3: I'm also supportive of game-enhanced learning. It's a great way to boost student motivation and foster creativity. I particularly enjoy how games can adapt to different skill levels, which is helpful in a diverse classroom.

Educational Value and Learning Outcomes

Conceptual Understanding: Digital games can facilitate deeper understanding of complex concepts. Teachers use games to simplify and illustrate challenging topics, such as scientific processes or historical events, making them more accessible to students.

T5: I have a generally positive view as well. Games can provide historical simulations that make abstract concepts more tangible. However, it's essential that the games align well with the curriculum and learning objectives.

Skill Development: Games help in developing various skills, such as problem-solving, critical thinking, and collaboration. For instance, puzzle-based games can enhance cognitive skills, while simulation games can improve

decision-making abilities.

T3: One major benefit is the immediate feedback that games provide. Students can see the results of their actions right away, which helps with understanding concepts. Games also offer a safe environment for experimentation.

Alignment with Curriculum and Pedagogy

Curricular Integration: A common theme is the need for games that align well with educational objectives and curriculum standards. Teachers seek games that complement and enhance the learning goals of their lessons rather than serve as mere distractions.

T1: For history, games can immerse students in different eras and cultures, making the content more relatable and memorable. They also encourage critical thinking and decision-making, which are crucial skills in history.

Pedagogical Fit: Effective integration of games requires thoughtful alignment with pedagogical strategies. Teachers emphasize the importance of using games in a way that supports and enhances their teaching methods.

T4: In English, games can make learning vocabulary and grammar more engaging. They also offer opportunities for collaborative work, which can improve communication skills among students.

Challenges and Limitations

Selection and Quality: Finding high-quality, curriculum-aligned games can be challenging. Teachers often face difficulties in sourcing games that are both educational and engaging, and ensuring they meet educational standards.

T10: One challenge is ensuring that the games are age-appropriate and aligned with the curriculum. Sometimes it's hard to find games that meet both criteria. There's also the issue of screen time and balancing it with other activities.

T9: My main concern is the time required for preparation and integration. Finding quality games and learning how to use them effectively can be time-consuming. There's also the risk of some students becoming too competitive, which can affect group dynamics.

Distraction Risks: There is a concern that games may sometimes become a distraction if not properly managed. Teachers need to balance game-based activities with other instructional methods to maintain educational focus.

T7: I've faced similar challenges. Not all games are created with educational goals in mind, so it can be a bit of a trial-and-error process to find what works. Additionally, there's the potential for distractions if students aren't fully focused on the educational aspects of the game.

Addressing Skepticism

Demonstrating Value: Teachers often need to address skepticism from colleagues and parents by demonstrating the educational benefits of digital games. Providing evidence of how games support learning objectives and showcasing positive outcomes can help alleviate concerns.

T 1: I try to demonstrate the educational value of the games by sharing success stories and data on student improvements. Open communication about how the games support learning objectives helps address concerns.

Transparency: Clear communication about how games are used in the classroom and their alignment with educational standards is crucial in gaining support from stakeholders.

T5: I involve parents and colleagues in the process by providing them with information on the games and their educational benefits. I also offer to show them how the games are used in the classroom.

These themes (see Table 3) provide a comprehensive overview of teachers' perspectives on DGEL, highlighting both the advantages and challenges associated with this approach, as well as its potential future developments.

Table 3.

Extracted themes on ADGBL

Major themes	Subthemes
Increased Student Engagement	Interactive Learning Enhanced Motivation
Educational Value and Learning Outcomes	Conceptual Understanding Skill Development
Alignment with Curriculum and Pedagogy	Curricular Integration Pedagogical Fit

Challenges and Limitations	Selection and Quality Distraction Risks
Addressing Skepticism	Demonstrating Value Transparency

Discussion

This study explored the perspectives of Iraqi English as a Foreign Language (EFL) instructors about ADGBL. The quantitative and qualitative analyses of the data showed that participating teachers had a positive attitude towards using games in their teaching. However, they pointed out some challenges to the adoption of this approach. In other words, the teachers were prone to facing challenges when it came to developing suitable activities and methods for teaching a certain subject. This finding aligns with prior studies on ADGBL, which indicate that comprehending the interconnected linkages between technology, pedagogy, and content is a difficult undertaking (Lee & Tsai, 2010). Teacher educators must identify games that give excellent learning opportunities for subject matter acquisition, demonstrate the process of designing lessons based on games, and offer instructors the chance to create their own game-based lessons. The process of learning through designing has been recognized as the primary facilitator in the development of teachers' Technological Pedagogical Content Knowledge (TPACK) (Chai et al., 2011; Mishra & Koehler, 2006). EFL teachers should actively participate in the creation of game-based lessons to enhance their students' educational experience. To address the issues raised by teachers regarding the adverse impacts of gaming, we propose that these concerns be clearly articulated during professional development sessions. Furthermore, these concerns should be seen as essential guidelines that must be considered by instructors when designing game-based learning experiences. The survey completed includes sections on educational opportunities, game preferences, gaming experience, and attitudes towards learning through games. The findings indicated that Iraqi English as a Foreign Language (EFL) teachers held positive attitudes towards game-based learning, although acknowledging their lack of adequate expertise with games. This discovery highlights the need to offer many opportunities for teachers to investigate different digital games. The game-playing experience of teachers is a great source of knowledge for designing game-based learning.

The impact of gaming experience on game knowledge and teachers' beliefs and confidence, in comparison to their non-gamer peers, has been demonstrated by several studies (Hsu et al., 2017; Hsu et al., 2020; Lee, 2023). In certain instances, teaching experience has been demonstrated to be a more important element due to the enhanced pedagogical understanding of experienced teachers. This information enables them to be more eager and capable of effectively utilizing new educational mediums in practice (Hsu et al., 2017). Utilizing games as a teaching method might inherently enhance teachers' readiness and understanding of the difficulties linked to DGBL. These results indicate that digital nativity does indeed influence game experience. However, the significance of teaching experience combined with the positive outcomes of game-focused professional development and pre-service education demonstrates that any teacher has the potential to become a believer. This concept aligns with the argument made by Bennette and Mason (2010) that digital natives should not be seen as a uniform or homogeneous community. Based on these concepts, it is evident how the demographic aspects are connected to other issues.

Conclusion

This study has enhanced our comprehension of the views of teachers on DGBL in Iraqi EFL settings. Teachers are incorporating educational games into their classroom instruction. The typical educator who uses learning games is not always a young male educator who self-identifies as a gamer, but rather an average educator. Although there may be some obstacles to using learning games, they seem to be less important than understanding how to incorporate them into education and recognizing their value as instructional tools. To enhance the utilization and effectiveness of learning games among educators, professional development should prioritize two aspects: showcasing the attributes of digital games that make them effective learning tools and adopting a pedagogical approach to integrating these games into the curriculum. If educators possess the capacity to include educational games in their instructing, it is likely that they will utilize learning games as an additional instructional tool in their range of skills.

It is evident that digital games are not a miraculous solution that will instantly enhance learning, and there is no guarantee that students will respond positively to the usage of games or engage with them in a manner that aligns with the educational objectives. Therefore, teachers who choose to employ games must understand the importance of acting as a mediator, combining the inherent advantages of games with scaffolding and well-defined instructional objectives, as demonstrated by the lack of knowledge barrier. Teachers must consider that DGBL may not be suitable or possible in all situations, such as when it is not feasible for entire modules. This is evident in certain countries where the national curriculum is too restrictive or when there is a lack of knowledge and

support, resulting in insurmountable logistical difficulties. Moreover, both educators and future research should exercise caution regarding the disparities that emerge among other disciplines. For example, civics teachers may encounter more difficulties in overcoming obstacles linked to locating games with sufficient content or identifying opportune opportunities to incorporate games, in comparison to language teachers. This is because the latter focuses on teaching a subject where, in most instances, the content is not the primary focus. Instead, the content is used to achieve the aim of language usage or learning

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