DİJİTAL OYUN TEMELLİ YABANCI DİL ÖĞRENİMİNDE DİL BECERİ ALANLARININ DEĞERLENDİRİLMESİ*

EVALUATION OF STUDIES ON LANGUAGE SKILL AREAS OF DIGITAL GAME-BASED FOREIGN

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ÖZET
Dijital oyun temelli yabancı dil öğrenimi son yıllarda yaygınlaşan bir konu olarak karşımıza çıkmaktadır. Son dönemlerde teknolojinin gelişmesi ile birlikte oyun sektörü de ciddi anlamda gelişme kaydetmiştir. Bu durum sonucunda insanların dijital oyunlara olan ilgisi giderek artmıştır. Bu oyunların eğitim alanında kullanılması ise son yıllarda literatürde giderek artan bir konu hâline gelmiştir. Özellikle yabancı dil eğitiminde farklı beceri alanlarının kullanılmasına yönelik yapılan bu çalışmalarda öncelik kelime bilgisi olmuştur. Ancak teknoloji ve oyun sektörünün hızla gelişmesiyle birlikte bu durum dil becerilerinin farklı alanlarda çalışma yapılması ihtiyacını doğurabilmektedir.
Dijital oyun temelli yabancı dil öğrenimi son yıllarda yaygınlaşan bir konu olarak karşımıza çıkmaktadır. Bu çalışma, küresel olarak çeşitli eğitimsel ve eğitim dışı bağlamlarda gerçekleştirilen dijital oyun tabanlı yabancı dil öğrenme beceri alanları üzerine bir analiz çalışmasını amaçlamaktadır.

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Literatür taraması 2010-2021 yılları arasında yapılmış güncel çalışmaları kapsamaktadır. Çalışma tarama modelinde olup içerik analizi tekniği ile analiz edilmiştir. Araştırma kapsamında 145 akademik çalışma incelenmiş, 57 çalışma konu ile ilgili olmayanlar hariç tutularak belirlenen kriterlere göre kategorize edilmiştir. Veriler, IBM SPSS 26.0 kullanılarak frekans– yüzde olarak hesaplanmıştır. Araştırmanın güvenirliğini sağlamak için kodlama güvenirliği hesaplanmış ve %91 olarak bulunmuştur. Araştırma sonuçlarına göre son yıllarda dijital oyun temelli yabancı dil öğretimi ile ilgili çalışmaların sıklığının arttığı gözlemlenmiş ve bu çalışmaların çoğunun kelime hazinesine odaklandığı tespit edilmiştir. Bu çalışma sonucunda dijital oyun temelli yabancı dil eğitimi ile ilgili gelecekte yapılacak çalışmalarda kelime dağarcığının yanı sıra okuma, yazma ve dinleme becerileri alanlarında da çalışmaların yapılması önerilmektedir. Dijital oyun temelli yabancı dil eğitiminde beceri alanlarını inceleyen bu çalışmanın literatüre katkı sağlayacağı düşünülmektedir.

Anahtar Kelimeler: yabancı dil eğitimi, dijital oyunlar, dil becerileri, içerik analizi

ABSTRACT

Digital game-based foreign language learning has grown as a popular topic in recent years. Vocabulary knowledge has been prioritized in this research, particularly in the application of several skill areas in foreign language teaching. However, with the rapid growth of technology and the game business, this circumstance may necessitate the study of language skills in a variety of fields.

In recent years, digital game-based foreign language learning has grown as a popular topic. This study seeks to conduct a comprehensive investigation of the skill areas of digital game-based foreign language acquisition in diverse educational and non-educational situations throughout the world. The evaluation of the literature covers current investigations completed between 2010 and 2021. The research is in the scanning model, and it is being examined using the content analysis approach. Within the scope of the study, 145 academic papers were investigated, and 57 studies were classified according to the defined criteria, omitting those that were unrelated to the issue. IBM SPSS 26.0 was used to compute the data as frequency - percentage. To confirm the study's reliability, the coding reliability was computed and determined to be 91%. According to the findings of the study, the number of studies on digital game-based foreign language instruction has grown in recent years, with the majority of these studies focusing on vocabulary. As a consequence of this research, it is advised that future studies on digital game-based foreign language instruction should include reading, writing, and listening abilities in addition to vocabulary. This study is expected to contribute to the literature by assessing skill areas in digital game-based foreign language instruction.

Keywords: foreign language education, digital games, language skills, content analysis

1. INTRODUCTION

Regarding education, latest technology breakthroughs have the option to get new avenues. Several of these options involve the usage of digital games in EFL classes. Bilingualism through digital games (DGBLL) provides a distinct educational viewpoint. When it comes to digital games' core features, through aspects of becoming instructional, a learner-centered study subject and entertaining appropriateness for the learners' level and age is acquired. Much research has been carried out on the influence of DGBLL, both of which have become increasingly popular as a result of the epidemic (Kohnke, 2021b; Moorhouse & Kohnke, 2020; Wang & Tahir, 2020). Regardless of the fact that there has been a lot of research on digital-based foreign language instruction for those who grew up with rising technology, there has been little research into the issue in growing and impoverished nations.

Students benefit from DGBLL because it helps them overcome learning anxiety, increase motivation, and reduce obstacles in understanding and integrating the content. As a consequence, it can be demonstrated that it provides educational advantages across a wide range of courses. Numerous investigations have revealed that playing digital games help with foreign language acquisition, and Krashen's hypothesis backs up this claim (Krashen 1982). The experiences that students gain while experimenting games, might be beneficial to them. Krashen (1982) claims that the learner must be active and motivated in order to get the necessary knowledge. Klimova and Kacet (2017) claim that DGBLL facilitates the learning procedure:

• Makes sensorial interaction in the target language easier

• Highlights a specific grammatical point (vocabulary and grammar)

• Assists in maintaining uniformity in language experience and training

The learner, involved in the game, has a high degree of desire, and improves the longevity of learning, which is one of the factors highlighted in these. Because everyone who has grown up with technological improvements has an interest in digital games and technology. DGBLL encourages active learning and increases motivation at work. Combining students' thinking and assessment abilities with educationally themed digital games might help them learn more while having fun. Data entry in a digital setting can also aid in determining how much time learners spend on DGBLL. As a result, students will be able to produce high-quality things while they are still learning. Furthermore, thanks to substantial resources, DGBLL will allow people of various intelligences to be addressed.

To summarize, it is attempted to fill a literature gap about what sectors DGBLL is utilized in EFL classrooms and also why more focus is given on this subject. In addition, it is significantly contributed to illustrating the dearth of studies on which language skills digital games are expected to provide in the future.

2. LITERATURE REVIEW

In the twenty-first century, the utilization of technology in teaching has become unavoidable. The utilization of technology in education is growing in order to motivate learners to utilize technology in EFL situations, enhance classroom atmosphere, promote self-discipline, and increase peer interaction (Kessler, 2018). Many trainers have commenced to adopt digital applications and technologies (e.g., Mentimeter and GoSoapBox) as a more intriguing approach to conventional activities in their job (Kohnke, 2021a; Moorhouse & Kohnke, 2020; Wang & Tahir, 2020).

The terms "online games" and "digital game-based learning" are nearly interchangeable. A computer game that is played via the internet, is considered an online game; Straight from the network, activities are saved and replayed. (Roslina & Azizah, 2008). Therefore, DGBLL is a type of instruction that involves the use of electronic games (Tang et al., 2009). The term "online games" refers to learning via the use of online games.

People all around the globe are keen on digital games, and the worldwide video game industry is anticipated to increase by 30% between 2010 and 2019, reaching $19.6 billion (Hamizul & Rahimi, 2021). In a recent video game study, 49% of 2,001 respondents reported they used video games, with 10% claiming to have an "avatar" character (Hamizul & Rahimi, 2021).

There is no doubt that digital games are increasing their popularity in educational contexts. For the last decade, teachers have been researching the intrinsic intricacy and advantages of digital games, besides the great potential it offers for successful, relevant cross-disciplinary education (Gee, 2007; Squire, 2009; Mc Gonigal, 2013). Much earlier than most people understand, research on the utilization of DGBLL commenced (e.g., Phillips, 1987; Hubbard, 1991).

In the last five years, there has been a significant increase in hypothetical and evidence-based research on DGBLL (e.g., Sykes et al. 2008; Benson & Chik, 2011; Cornillie et al. 2012; Reinders, 2012; Reinders & Wattana, 2012; Reinhardt & Sykes, 2012; Thomas, 2012; Peterson, 2013; Sykes, 2013). Nadolny et al. (2020) presented their work in Figure 1 in order to contribute to the literature.
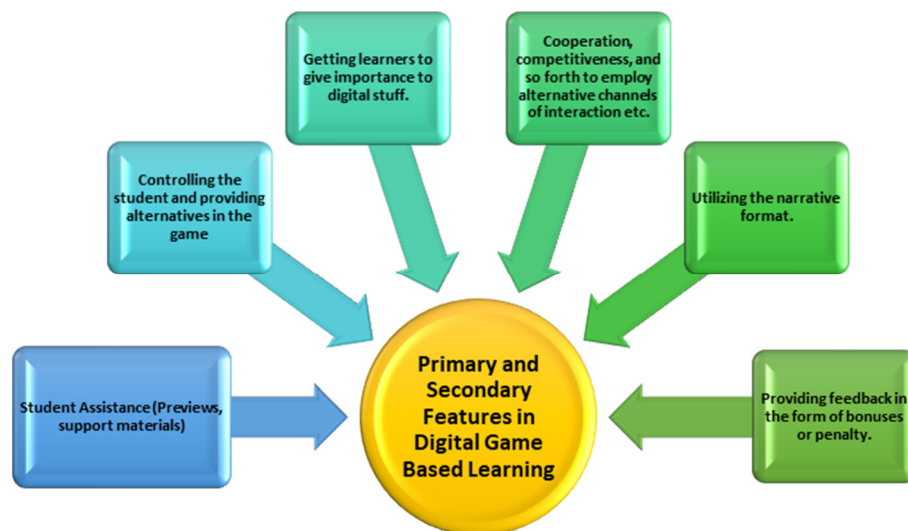

Figure 1. Primary and Secondary Features in DGBLL

This framework may be used as a starting point for teachers fond of how games are developed. Using this strategy, researchers and teachers may make judgements about DGBLL.

In order to enhance our comprehension over DGBLL, different linguistic acquiring theories, such as L2 learning(Pavlenko & Lantolf 2000) and Krashen's theory of lowering emotional constraints to EFL within the framework of socio-cultural theories, have been spotlighted in studies (DGBLL). It has also been argued that learners develop from practices of gameplay while training since they absorb the intended subject more easily and enjoyably.

It was investigated whether digital education may increase language proficiency to assist learners in developing EFL using DGBLL. Even though some research provides contradictory findings (e.g., Jalali & Dousti 2012; Lucht & Heidig 2013), others incorporate DGBLL's vocabulary (e.g., Ebrahimzadeh 2017; Jensen 2017) grammar (e.g., Ebrahimzadeh 2017; Jensen 2017) and syntax (e.g., Cornillie et al. 2017; Ebrahimzadeh 2017; Jensen 2017; Mehrpour & Ghayour 2017). DGBLL is said to be effective in both writing (Allen et al. 2014; Lin et al. 2018) and speaking (Hwang et al. 2016).

Kahoot! It has been shown that creating extra material (ideas, data) may help learners attain competence in EFL by rendering earlier provided knowledge increasingly fluid and focused (Wang & Tahir, 2020). Kahoot! Despite its popularity ever since its launch in 2013, which has yet to completely achieve its promise in the ESL classroom. Moreover, it was stated that in order for teachers to properly use it, one must first have a good understanding of the subject. Kahoot! As an outcome of the study, it's been established that gamification of provided knowledge, if used in combination with the teaching approach, encourages learner participation and perhaps increases student accomplishment.

The bingo game was produced on a digital service and distributed to selected respondents (Mustika et al. 2014). As a part of this research, a BINGO game was constructed on the PC. In the study, an electronic BINGO game was developed as an operating instructional tool for developing reading skills in people enrolled. The web host and CPU design are used to create a bridge system.

The queries and results of the assessment were stored on the central server. The clients are split into 2 integrations: one for schools, which accepts queries and displays them in a 6x6 matrix pattern, and another for instructors, who may examine wins and losses and change the queries. To render the examination more engaging and fluid, the participant was provided the option of selecting queries via a mobile application network hardware. As a result, the digital BINGO game was used as an operating tool in teaching reading to people studying Indonesian as a foreign language, and it was reported that it helped to evaluate pupils' reading skills and enhance their enthusiasm. Some EFL students, on the other hand, claim that when it comes to educational learning via games, students only use the language to a small extent.

The study found that online games have the power to enhance linguistic use for (1) game-player contacts, (2) player-player engagements in the game's setting, and (3) player-player interplay within the game (Sykes & Reinhardt, 2012). Much of the academic evidence on DGBLL has focused on the EFL potential of player-player encounters in competitive internet games instead of the limitations of using the language in social situations. Even though it was looked at the EFL potential of player-game contacts in simulation games (e.g., Ranalli, 2008), the main focus was on the various methods in which player-game engagement increases language learning possibilities instead of game mechanics.

The increasing practicality and penetration of smart technologies, like the Apple Watch, Fitbit, Bella Beat, and many others, could have an impact on how customers view games (Sykes, 2017). In some areas, Fitbit jogging and sprinting competitions, along with interactive virtual games like Pokémon Go, are prominent. The Google Pixel headphones were introduced a few weeks earlier as an "immediate translation system" for people to use while exploring. A outstanding demonstration is when an instructor is completely engrossed in a theatrical situation while strolling through a gallery or museum, prompting students to raise their heads from their devices and give heed to the stuff in front of them in order to successfully comprehend the artwork they discover.

Not only game-enhanced education (with commercialized, off-the-shelf games) but also game-based education (utilizing online games specifically aimed at teaching to learn international languages) have been investigated, and online games can allow learners to learn in different ways and methods (Peterson, 2006; Bryant, 2008; Peterson, 2012).

Future studies, when paired with current research, are likely to not only recommend changes in DGBLL, but also provide new learning experiences and provide a wide variety of exciting options in EFL, incorporating online gaming. Compare an ESL class where pupils demand to learn till the bell goes in order to "go on to another level," as compared to an instructor who can offer individual feedback as needed or work with a specified subset of pupils on any subject in a group of 30. Incorporating the right online games into the school is an approach for creating powerful team and customized classroom experiential learning that utilizes the teacher's expertise and abilities. That's why, this method looks to be long-term viable.

3. MATERIALS AND METHOD

3.1. Content Analysis

Examining and interpreting scientific theories, specialized qualifications, and investigator facts are all part of the content analysis approach. Two scholars with identical academic backgrounds and experience of DGBLL) executed content analysis to ensure consistency in coding assessment (Krippendorff, 1980). A Ph.D student who is a four - year public language lecturer in the DGBLL research team, along with two associate professors with a total of 10 years on the job, investigation, and publication expertise, leads the taskforce.

Content analysis is the method of meticulously assessing a document or speech in order to make inferences about its significance (Neuendorf, 2017).

Content analysis in teaching is used for a variety of objectives involving examining patterns in published pedagogical and technological research (Shih et al. 2008; Bozkurt et al. 2015; Zawacki-Richter & Latchem, 2018). In the study, the content analysis method was used to analyze common parts of the contents of papers published in DGBLL that fell into the content analysis category. This technique is based on similarities in the existing literature as a basis for data analysis (Krippendorff, 1980). The paper assessment process is depicted in Figure 2.
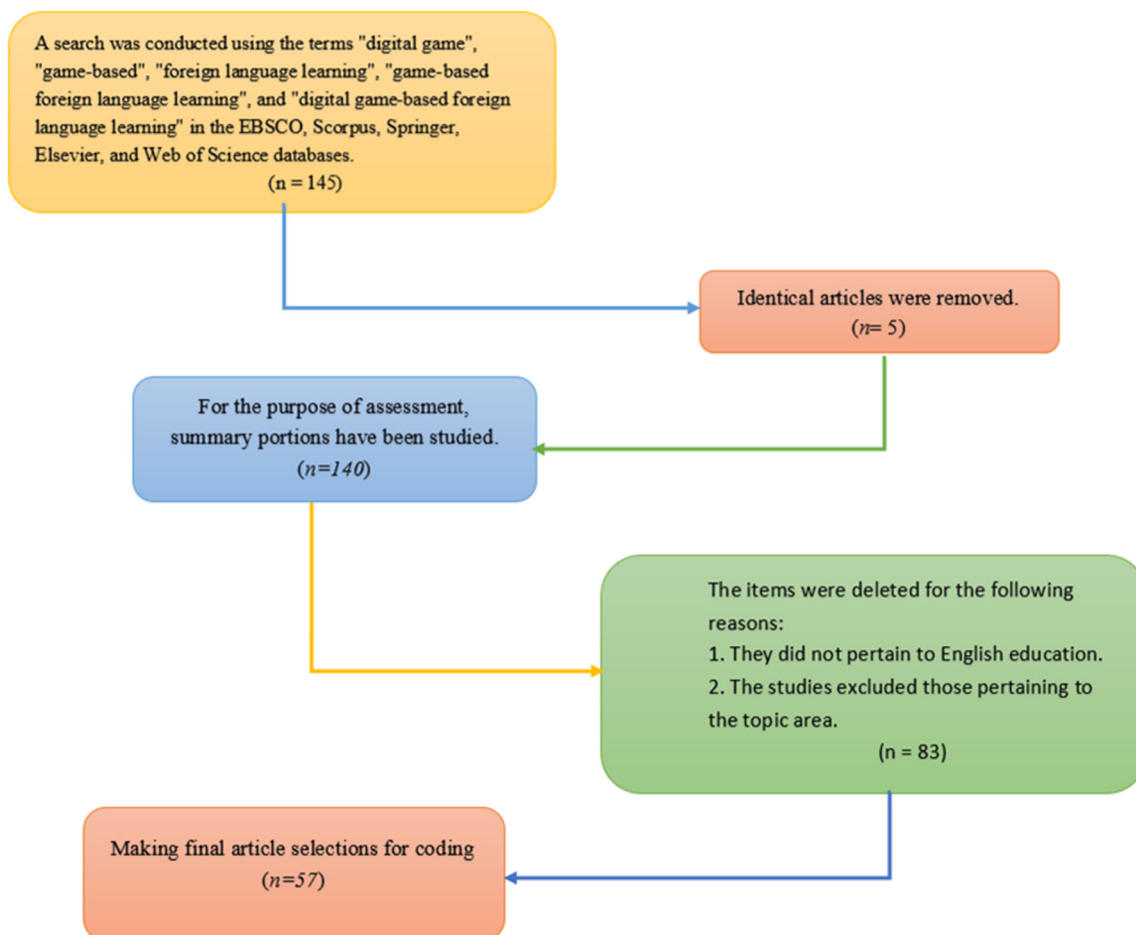

Figure 2. Article Evaluation Procedure

The number of overlaps [Reliability = (Number of Overlaps + Non-overlaps) / (Number of Overlaps + Non-overlaps)] the coding dependability level was determined to be 91 percent using the method (Baltacı, 2017: 8). It is suggested that coding reliability be at least 80% (Miles & Hubermann, 1994; quoted in Baltacı). The data were then thoroughly examined and evaluated after being translated into frequency, percentage, and visual tables in accordance with the study's requirements.

Using a grounded approach, the variables were obtained from the working literature (Neuendorf, 2017). The team looked at studies based on educational levels as well as empirical research that used frameworks or models to explain game learning characteristics. The papers were evaluated using a continuous comparison approach until theoretical saturation was attained (Bowen, 2008). The qualities were established by classifying the issues into two categories based on conceptual agreement (Figure 3).
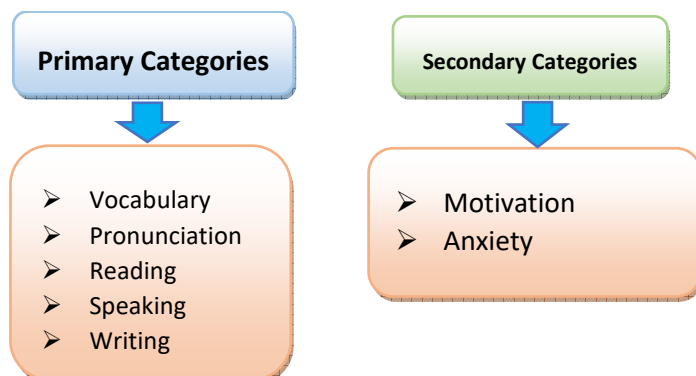
Figure 3. The Subject Areas of Content Analysis

As shown in Figure 3, there are studies in the major categories that focus on linguistic abilities, and studies in the secondary categories that focus on emotional regions with DGBLL. Language abilities in all categories were thoroughly examined, as was research concentrating on motivation and anxiety connected with digital game-based foreign language acquisition.

In this study, 145 studies conducted between 2010 and 2020 within the scope of DGBLL were examined, and the terms "digital game," "game-based," "foreign language learning," and "game-based foreign language learning" were used in the search of the studies in EBSCO, Scorpus, Springer, Elsevier, and Web of Science databases. "Digital game-based foreign language learning" was searched for using keywords. The coding form was used to categorize all 145 studies discovered as a consequence of the scanning (Annex A.). DGBLL experts review the coding form to guarantee that the research tool is full and unambiguous (Neuendorf, 2017; McKenzie et al. 1999). This form was designed to satisfy the criteria stated in Figure 3.

4. FINDINGS

The findings connected to the language skills studies within the scope of game-based foreign language acquisition are shown below as frequency, percentage, and graphic within the scope of the descriptive aspects of the research. Figure 4 depicts the topic distributions according to the English sub-skills in the first category.
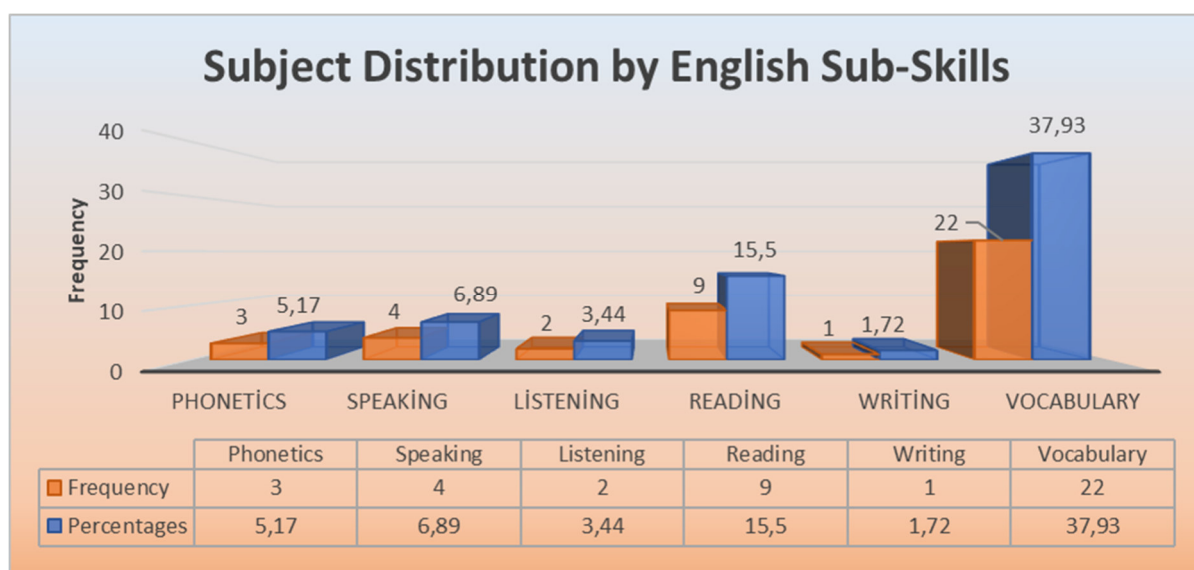

	Phonetics	Speaking	Listening	Reading	Writing	Vocabulary
Frequency	3	4	2	9	1	22
Percentages	5,17	6,89	3,44	15,5	1,72	37,93

Figure 4. Subject Distribution by English Sub-Skills

When Figure 4 was analyzed, it was discovered that the overall frequency (f = 41) was 37.93 percent (n = 2) of the research on DGBLL at the word level, with the least amount of studies on writing skills at a level of 1.72 percent (n = 1). Based on these findings, the most significant deficiencies in the DGBLL literature are in writing skills, followed by hearing, pronunciation (phonetics), speaking, and reading abilities.

Figure 5 depicts the frequency-percentage table for the research done in the second group based on motivation and anxiety level.
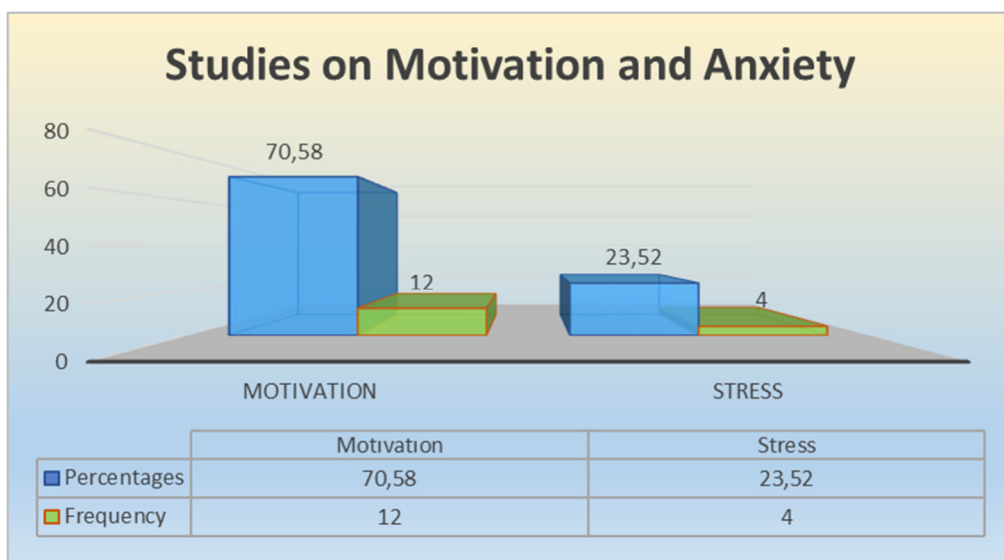

Figure 5. Studies on Motivation and Anxiety

When the aforementioned figure was studied, it was discovered that the overall frequency was (f = 16), and the studies done while giving language skills were on motivation at the most, 70.58 percent, and anxiety at least 23.52 percent in the DGBLL field. This condition implies that students who participate in game-based foreign language education have more work in their motivating situations, implying that DGBLL has an appealing aspect for learners.

5. DISCUSSION AND CONCLUSION

This is content analysis research that looks at the sub-areas of language skills in DGBLL. A thorough examination of this research on the various language abilities of DGBLL, which is becoming increasingly relevant, is required. When the findings are analyzed, it is discovered that there are relatively few studies on DGBLL in the literature as a consequence of the study conducted in this area. Furthermore, studies on DGBLL variables such as motivation and anxiety are insufficient. These investigations are expected to increase in the future. As a result of this research, it has been determined that the writing and reading components require the greatest attention. As a result, this study sheds light on which field of DGBLL should be explored in the future by acquiring statistical data on studies conducted on language skills in the field of DGBLL.

When the datasets are considered in aggregate, they reveal a significant vacuum in the literature in the field of DGBLL, particularly in the development of language skill domains. When the historical developments of the games in the conceptual framework are analyzed, it has been discovered that the research in the field of DGBLL was only at the word level. However, supplementing this research with other skill areas and determining how successful DGBLL is in language acquisition domains will add to the body of knowledge.

To address the limitations of this study, a content analysis of DGBLL can be performed in future studies, not only in the field of language skills, but also in general. Furthermore, in the field of DGBLL, its efficiency may be evaluated not only in terms of vocabulary, but also in terms of listening and writing abilities. It is planned to contribute to the literature by doing essential research in this sector.

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