E-ISSN : 2181-4341
https://wordlyknowledge.uz
IMPACT FACTOR(SJIF) : 3,934

DUOLINGO AS A MODERN EDUCATIONAL TECHNOLOGY IN THE TERMS OF TEACHING FOREIGN GRAMMAR

Supervisor: Samieva Sayyora Ne'matovna,
a senior teacher of UzSWLU
Student: Mirkhasan Mirsaidov,
the 2nd category school English teacher,
a MA senior student of UzSWLU

ABSTRACT: The goal of this research was to conduct an examination of the Duolingo software as a current technology for teaching foreign grammar. As samples for the current study, children from middle school no276 were chosen. It was based on the outcomes of a pre-test and a post-test after six months of classes. The treatment group, which comprised of 20 students, was studied using quasi-experimental research. The mean pre-test score was 64.1, while the mean post-test score was 69.3 out of 100. These data, which were examined using a paired t-test in JASP, demonstrated that utilizing Duolingo as a contemporary technology in teaching foreign grammar improved students' performance significantly by rejecting the null hypothesis.

Key words: Grammar, technology, foreign language, app, modern.

INRODUCTION

Technology has an impact on language instruction in all skill areas, including listening, speaking, reading, and writing (grammatical, sociolinguistic, discourse, and strategic). Because of its role in all of these areas, grammar instruction using technology presents both distinct challenges and opportunities. Before delving into the issues and possibilities for teaching grammar with technology, it's a good idea to establish some crucial terminology. When Dontcheva-Navratilova (2013) defines grammar as "the set of rules and principles underlying the form and meaning of words, phrases, clauses, and sentences," she underlines the significance of meaningful communication within linguistic structure (p. 1). The current period, notably the widespread use of CoVid-19, is a reason for the appearance of innovative technologies in the educational sphere. Because of this, online learning technologies are being used in the pedagogical field. Likewise, with over 200 million users globally, Duolingo is widely considered as one of the most popular language learning technologies and software (Draycott, 2017). That's why, this app was selected as a current technology and researched the effectiveness in teaching foreign grammar.

LITERATURE REVIEW

It's also important to note that, despite the fact that Duolingo's translation and dictation tasks are reminiscent of the grammar-translation approach from earlier times, modern research demonstrates their usefulness. According to Hall, Graham, and Cook (2012), second language acquisition (SLA) research is once again focusing on the importance of translation. The rationale, in their words, "is that translation is a natural and effective way of learning a language in many circumstances, develops an important skill, fulfills students' wants and preferences, and safeguards students' linguistic and cultural identity." (2012).

Recent SLA study suggests that dictation may also be advantageous in this instance. Rahimi (2008) carried out an intriguing experiment in which one set of students practiced dictation in class along with their regular assignments, whereas the other group ignored the dictations. His research findings revealed that the group with more dictation practice improved grammar, vocabulary, reading comprehension, and listening comprehension. In a different experiment, Kuo (2010) had students decode words they heard on the radio using dictation. The dictation activities improved the pupils' comprehension and helped them listen more effectively. Dictation is also regarded as a legitimate language acquisition tool by Nation and Newton (2009). "Dictation enhances language learning by forcing learners to concentrate on the language form

E-ISSN : 2181-4341
https://wordlyknowledge.uz
IMPACT FACTOR(SJIF) : 3,934

of phrase and clause level constructs, and by offering feedback on the accuracy of their perception," the authors observe. Additionally, they think that dictation is most effective when it uses well-known language that is delivered in a variety of ways and, most crucially, when "there is an opportunity for the repeat of the material" (p. 60). They contend that the lesson is even more important when students are aware of the errors they have made. According to our observations of the Duolingo app, each of these traits is present.

According to Amin (2019), using the Duolingo program can help students become more proficient wordsmiths. The learning process is made more enjoyable and efficient by its use. Learning is free while competing against the time, receiving points for accurate answers, and leveling up. Students become more engaged and assured as a result. Additionally, according to Bennani & Mosbah (2018), the improvement validated the Duolingo platform's efficacy in fostering learners' vocabulary and grammatical acquisition. Students can expand their word bank and automatically pick up on sentence structure principles. Students can also readily comprehend the lessons and independently practice language learning. The pupils' social learning is further enhanced because they can communicate with other language learners through leaderboards.

Research question and hypothesis

The research was focused on the results of the following research question: “Can Duolingo increase pupils’ grammar in the terms of pedagogical technologies?”

From these, the following null hypothesis appeared: “Duolingo cannot improve students’ grammar in the terms of pedagogical technologies”.

METHODS

Research Participants

The pupils at the secondary school №276 in Shaykhantahur district, Tashkent were chosen as populations of the research. It is a public school and decided to use English as a medium of instruction from grades 6. The pupils who were the age of teenagers were taken as samples. The experimental group consisted of 20 members. 9 female and 11 male students participated in the research.

Research instruments

The website www.duolingo.com and the Duolingo app were selected as the research mean. Although Duolingo consisted of a lot of language aspects, such as vocabulary, listening, speaking, pronunciation, and grammar, mostly the changes and improvements in students’ grammar were noticed.

Procedure

The previous information and investigations were worked out from November 2021 till September 2022. After the investigation of further data, the empirical part of the study was made for half of a year. Quasi-experimental research was preferred in order to get information faster in a given period. For this, the population of the research work is selected as an experimental group. The pre-test was taken from all group members to know the level of their grammar. After this, the results were defined. In 6 months, the treatment group was instructed via Duolingo inductively. Mostly, “to be”, present simple, present continuous, past simple can, “to have” were learned by all members. There were 3 lessons in each week. Overall, every group had about 70 lessons. After all the lessons, the post-test was used. All results were analysed by paired t-test via JASP program.

RESULTS AND DISCUSSION

The paired t-test was used in order to analyse the findings of the pre-test and post-test of the treatment group.

Table 1. Descriptives

	N	Mean	SD	SE
Pre -test	20	64.100	5.785	1.294

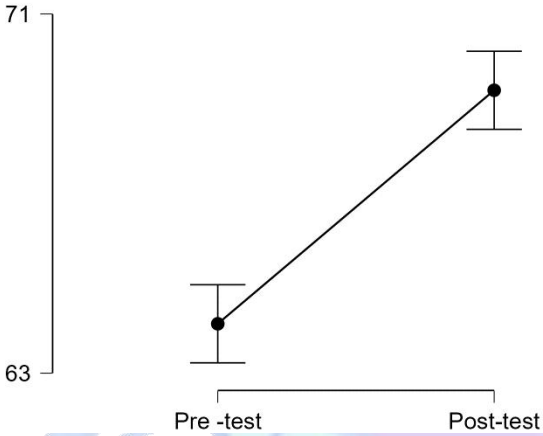
E-ISSN : 2181-4341
https://wordlyknowledge.uz
IMPACT FACTOR(SJIF) : 3,934

Table 1. Descriptives

	N	Mean	SD	SE
Post-test	20	69.300	6.334	1.416

The Table 1 indicated the results of pre-test and post-test. According to means of the tests, it was 64.1 in the pre-test by going up to 69.3 in the post-test. This showed the post-test got higher results rather than the pre-one. Figure 1 was demonstrated the improvement between the results clearly by descriptive plots.

Figure 1. Descriptives Plots



The assumption checks between the pre-test and post-test of the treatment group was defined by test of normality in Table 2. According to the result of the p-value, null hypothesis was rejected by very strong evidence against it because p-value is less than 0.05.

Table 2. Assumption Checks

Test of Normality (Shapiro-Wilk)

			W	*p*
Post-test	-	*Pre -test*	*0.880*	*0.018*

Note. Significant results suggest a deviation from normality.

Cohen's D which shows the effect size was appeared in Table 3. On the basis of this, effect size which was higher o.80 was considered as a large one. So, this table gave the conclusion that there was highly significant improvement of teaching foreign grammar in the terms of using Duolingo as a modern technology in a large effect by rejecting null hypothesis.

Table 3.

Measure 1		Measure 2	t	df	p	Cohen d
Post-test	-	Pre -test	8.850	19	< .001	1.979

Note. Student's t-test.

As can be seen, 6 months survey with the experimental group was concluded that Duolingo was one of the effective modern technologies in teaching grammar in the second language acquisition.

E-ISSN : 2181-4341
https://wordlyknowledge.uz
IMPACT FACTOR(SJIF) : 3,934

Appendix 1

The pre and post-test results of the experimental group

ID	Pre-test	Post-test
EG-1	54	60
EG-2	60	68
EG-3	58	66
EG-4	64	70
EG-5	78	84
EG-6	76	84
EG-7	70	74
EG-8	64	68
EG-9	68	74
EG-10	62	64
EG-11	66	68
EG-12	66	74
EG-13	60	66
EG-14	62	64
EG-15	64	66
EG-16	60	62
EG-17	58	64
EG-18	64	74
EG-19	62	70
EG-20	66	70

WORDLY KNOWLEDGE

E-ISSN : 2181-4341
https://wordlyknowledge.uz
IMPACT FACTOR(SJIF) : 3,934

CONCLUSION

The purpose of this study was to define analysis of Duolingo program as a modern technology in teaching foreign grammar. The students of middle school №276 was preferred as samples of the current research. It was focused on the results of a pre-test and a post-test after 6 months courses. Quasi-experimental research was used in order to research the treatment group which consisted of 20 pupils. The pre-test mean score was 64.1, and the post-test mean score was 69.3 out of 100. These findings which was analysed by paired t-test in JASP revealed that using Duolingo as a current technology in teaching foreign grammar went up the students' performance in a large effect by giving up null hypothesis.

REFERENCES:

1. Amin, S. N. (2019). The Effectiveness of Duolingo on Students' Vocabulary Mastery at The Seventh Grade of Mtsn 3 Tulungagung. Institutional Repository of IAIN Tulungagung (IRIT). http://repo.iain-tulungagung.ac.id/11940/
2. Bennani, W & Mosbah, R. (2018). Investigating the Effectiveness of the Duolingo Platform in Developing Learners' Vocabulary and Grammar Acquisition Case of CEIL Adult Beginner EFL Learners. ERIH: European Reference Index for the Humanities.
3. Dontcheva-Navratilova, O. (2013). Grammar and discourse. In C. Chapelle (Ed.), The encyclopedia of applied linguistics. Hoboken, NJ: Wiley-Blackwell. doi:10.1002/ 9781405198431.wbeal0464
4. Draycott, R. (2017). Gamification is the key to Duolingo success says product manager Gilani at Canvas conference. Retrieved from http://www.thedrum.com/news/2017/10/26/gamification-the-key-duolingo-successsays-product-manager-gilani-canvas-conference
5. Hall, G., & Cook, G. (2012) Own-language use in language teaching and learning: state of the art. Language Teaching, 45 (3), 271-308.
6. Kuo, Y. (2010). Using partial dictation of an English teaching radio program to enhance EFL learners' listening comprehension. Asian EFL Journal Professional Teaching Articles, 47, 4-29
7. Nation, I. S. P., & Newton, J. (2009). Teaching ESL/EFL Listening and Speaking. New York: Routledge Publisher

Rahimi, M. (2008). Using dictation to improve language proficiency. Asian EFL Journal, 10 (1), 33-47

WORDLY KNOWLEDGE