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Effects of Dynamic Assessment Through Telegram on Academic Vocabulary Learning and Retention of Iranian Dentistry PhD Applicants

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Abstract

The effects of dynamic assessment (DA) principles on enhancing academic vocabulary learning of Iranian dentistry PhD applicants through Telegram were investigated in this study. The Oxford Quick Placement Test (OQPT) was conducted to evaluate 60 Iranian dentistry PhD applicants' general English knowledge. Then, 30 intermediate applicants were chosen, divided and assigned into three equal groups of control (CG), DA without using Telegram (DWTG), and DA using Telegram (DUTG). Initially, a pretest was taken to assess the participants' previous academic knowledge of vocabulary in the field of dentistry. The research was conducted in 10 sessions of two hours and 25 words, in each session, were presented to the three groups of the study utilizing narrow reading techniques involving repeated readings from thematically relevant short texts. After completing the treatment, they were tested to assess their vocabulary improvement. Then, they were tested again after two weeks to assess their vocabulary retention. The findings indicated that the participants in the experimental groups demonstrated significantly better performance, and the participants who learned vocabulary by Telegram significantly exceeded the ones who learned without telegram on the posttest. The same findings were also obtained for the delayed posttest.

Keywords: dynamic assessment, MALL, Telegram, vocabulary learning, vocabulary retention

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1. Introduction

Assessment is an essential component of every educational program, and an effective teaching course requires a suitable evaluation method (Farhady et al., 2001). Dynamic assessment (DA) is a language assessment approach that examines the impact of deliberate, short-term interventions on learners' achievement, aiming to measure both the level and rate of learning (Hadigheh & Khaghaninezhad, 2012). It merges assessment and instruction to assess and intensify learning potentials (Antón & García, 2021). Additionally, DA serves as an alternative approach to assess the language knowledge of English as a foreign language (EFL) learners compared to traditional methods. DA differs from traditional static assessment in three ways: 1) it focuses on the procedure rather than the product, emphasizing how learners approach tasks rather than their existing knowledge; 2) it incorporates the examiner's feedback; and 3) it shifts from examiner noninvolvement to establishing a personalized teaching and helping relationship (Grigorenko & Sternberg, 1998).

The concept of DA is rooted in Vygotsky's (1978) learning theory and Feuerstein's (1979) theory of mediated learning experiences. According to Vygotsky, learning happens within the Zone of Proximal Development (ZPD) through social communications, where an instructor guides and supports learners to improve their task performance (Limmerstedt & Lyhre, 2011). Feuerstein's theory of mediated learning experiences involves an educational process in which a teacher aims to enhance the learner's performance. Meditational interactions, as proposed by Feuerstein, foster higher mental operations like active learning, self-regulation, representational thinking, and strategic problem-solving. Lantolf and Poehner (2004) assert that focusing on the process rather than the outcome of development is crucial for understanding human mental functioning. This foundational principle distinguishes DA from other assessment methods.

Mobile-assisted language learning (MALL) integrates mobile technology into language learning, offering learners the flexibility to access educational materials without the constraints of physical classroom settings or fixed computer locations. MALL serves as an effective solution to address challenges related to time and location in language learning, as highlighted by Mosavi Miangah & Nezarat (2012). The emergence of mobile learning, which leverages

portable electronic devices for information access and sharing, represents a significant advancement in higher education. This transformative approach reshapes the learning process and instructional delivery methods, as noted by Geist (2011) and Miller (2012). By enabling students and professionals to swiftly access information from any location, mobile learning facilitates learning opportunities that are not bound by time or place, as emphasized by Rossing et al. (2012).

Commonly, a collection of words with their corresponding meanings is the best definition for vocabulary. A word encompasses various features, including its meaning, associations, collocations, grammar, and spelling (Schmitt, 2000). Vocabulary is a lexicon, which may include single and compound words, and idioms (Richards & Schmidt, 2010). Vocabulary knowledge connects the written form of a word to its meaning (Shanker & Ekwall, 1998). According to Nation (2001), vocabulary knowledge represents the number of words known by a language learner. Conversely, "depth of vocabulary knowledge" alludes to the extent to which a language learner understands a word (Akbarian, 2010, p. 392).

The significance of vocabulary learning becomes even more evident in the context of English acquisition. English vocabulary is extensive and complex, combining Germanic and Romance words (Meara, 2005). The importance of vocabulary knowledge in English language instruction and foreign language learning has been increasingly recognized (Iheanacho, 1997). Kawauchi (2005) points out that "language teachers generally acknowledge the importance of vocabulary learning and are exploring more effective ways to promote it" (p. 1). According to Laufer (1997), vocabulary learning lies at the core of language learning and language use. Vocabulary learning is highly valuable as it helps EFL learners enhance their listening, speaking, reading, and writing skills, ultimately improving their comprehension and production abilities (Gorjian et al., 2011).

Narrow reading is a valuable approach for EFL learners to expand their vocabulary knowledge by repeatedly encountering new vocabulary in various contexts. Learners are encouraged to engage in frequent reading to be exposed to a large volume of authentic English and develop their vocabulary knowledge (Krashen, 2004). Narrow reading is part of extensive reading and involves reading within a specific subject, genre, or author's works. The conception

of narrow reading, in line with Krashen's Input Hypothesis, suggests that shared context across different texts increases the likelihood of incidental learning. (Cho et al., 2005).

However, the potential benefits of narrow reading go beyond vocabulary learning and recycling, such as exposing L2 readers to the consistent stylistic and discourse patterns of specific authors (Gardner, 2008). He explains that narrative writings by a particular author contain more vocabularies with low frequency compared to texts written by various authors. Therefore, narrow reading is most valuable when combined with activities designed to provide direct instruction (Min, 2008).

Understanding words is crucial in any language. It is important especially for students to grasp academic and specialized English terms across different subjects. Additionally, MALL has become a popular method for teaching and learning languages, showing promise in improving EFL learners' understanding. Pérez-Paredes and Zhang (2022) point out that many studies have focused too much on technology, resulting in a fragmented view of second language (L2) instruction due to the diverse uses of mobile devices. Furthermore, DA offers an alternative way to assess EFL learners' abilities and can strengthen the connection between teachers and students. Thus, the current study aimed to explore how DA could enhance the vocabulary skills of Iranian dentistry PhD applicants through the use of Telegram.

2. Literature Review

Numerous findings have supported DA. Group-based DA effects in L2 classroom contexts were examined by Poehner (2009). The study demonstrated that organizing classroom activities using this approach allows teachers to explore and stimulate the group's ZPD while supporting individual learners' development.

Naeini and Duvall (2012) scrutinized the impact of DA on the reading comprehension performance of university students studying English Language Training (ELT). The study involved 10 ELT students in a pretest-mediation-posttest design, showing a significant development in their reading comprehension performance. Hadigheh and Khaghaninezhad (2012) studied the effects of DA on the general English test performance of Iranian medical students. The results indicated that teacher’s mediation within the students' ZPD significantly

facilitated student learning. Taghizadeh and Bahrami (2014) examined the influence of DA on the lexical inferencing ability of intermediate EFL learners in Iran. The study showed that DA, through appropriate mediation, enhanced learners' lexical inferencing ability. Hessamy and Ghaderi's (2014) study demonstrated that incorporating DA as an additional procedure to traditional testing positively impacted test performance and vocabulary learning for the learners.

Kao (2015) examined the interactionist DA's role in developing conceptual writing skills in L2 Chinese learners. The teacher's dialogic mediation supported learners' development, promoting understanding and enhancing their L2 skills, as shown in this research as a result. All participants effectively utilized appropriate rhetorical structures for writing tasks, although one instance of unhelpful mediation was identified.

Rajaeizadeh et al. (2015) investigated the effectiveness of DA on English vocabulary learning in young Iranian EFL learners. The study included 25 female elementary-level Iranian EFL learners. The Megasection method, applying the interventionist cake model of DA, was implemented. The analysis revealed a significant improvement in learners' English vocabulary abilities. Hanifi et al. (2016) studied the effectiveness of DA on incidental vocabulary learning in technical textbooks for electronic engineering students. A group of 25 BA electronic students participated. DA procedures were used to personalize the assessment. The results showed that DA significantly enhanced participants' incidental vocabulary learning by increasing their awareness of strategies and providing structured hints during the mediation process.

Adokh and Rafiee (2016) explored the perspectives of EFL teachers and learners on the procedure and practicality of DA in the Iranian educational context. The study involved 25 EFL teachers and 45 EFL learners who underwent a DA interventionist model while learning to write an essay. The results showed that student participants generally had positive opinions about DA, though not strongly positive. In contrast, teachers perceived the usefulness of DA in Iranian English classrooms to be low. Alemi et al. (2019) investigated the use of Telegram to enhance the DA of grammatical accuracy in EFL learners. They found that online DA conducted through Telegram facilitated noticeable progress in writing accuracy, surpassing performance in traditional contexts. The researchers suggested integrating online contexts,

such as social networks, into classes for enhanced feedback methods and time efficiency. They recommended utilizing social networks like Telegram for improved feedback access and retention.

Alsaadi (2021) discussed DA as a valuable approach that combines teaching and assessment, allowing language learners to be evaluated through authentic tasks. He emphasized the importance of adopting DA not only as an assessment tool but also as a means to increase language learning and teaching. By incorporating social media and DA in his study, he found valuable opportunities to improve learners' assessment, teaching methods, mediation procedures, and the provision of corrective feedback during the learning process.

Abdullateef and Muhammedzein (2021) conducted a study to investigate how DA could enhance EFL language learning. Their work was based on Vygotsky's ZPD and emphasized mediation within a supportive social setting and practice. The experimental group included 25 EFL students for the writing task and 20 students for the reading task. Pre-tests and post-tests were conducted using specific models for each task. Additionally, an online questionnaire was dispersed to 43 university teachers to gather their opinions. The analysis demonstrated a significant relationship between DA and language learning, particularly in the improvement of reading and writing skills. Teachers exhibited a positive attitude towards the use of DA in their classes.

In Momeni and Nushi's (2022) study, the beliefs of EFL teachers towards DA and its impact on students' motivation were explored. They also compared the points of view of university and language institute teachers. The study involved 40 Iranian EFL teachers from universities and language institutes. Data was collected through email interviews. The results, analyzed using statistical tests, showed no significant difference in the attitudes of university and language institute teachers towards DA. Both groups held an affirmative attitude towards its use.

Rezapour (2024) investigated the effect of DA on the motivation of Iranian elementary-level EFL learners. This quasi-experimental design investigation with two intact classes of 15, disclosed a meaningful difference between the DA versus non-DA groups. The obtained results

suggested that elementary-level teachers should incorporate DA in their classrooms to enhance learners' motivation.

Klungthong & Wasanasomsithi (2024) investigated the impact of DA on enhancing academic vocabulary knowledge among low-proficiency university students in Thailand. In this mixed-methods research, they highlighted how DA can facilitate vocabulary acquisition through structured tasks and mediation stages. While the study did not specifically focus on Telegram, it provided valuable insights into DA's effectiveness in academic vocabulary learning, which could be relevant when considering the integration of digital platforms like Telegram for similar educational goals.

Gatlabayan (2024) determined the effectiveness of MALL in improving the students' English vocabulary skills. In this quantitative research design, pre and post-tests were used to determine the influence of MALL on enhancing students' vocabulary skills. The results showed the usefulness of MALL platforms in improving the students' English vocabulary skills. The study also indicated the effect of different factors such as ease of use, usability, efficacy, compatibility, and the intention to use which affect system acceptance and learning.

While previous research has examined the effectiveness of DA, MALL, and vocabulary learning, there is limited literature on the role of DA in teaching academic vocabulary to EFL learners through Telegram. This research sought to build on existing studies of DA by implementing it through Telegram to enhance and evaluate vocabulary knowledge among Iranian dentistry applicants by broadening the scope of DA applications. This study posed the following research questions to answer:

1. Does DA significantly improve Iranian dentistry PhD applicants' academic vocabulary knowledge and retention?

2. Does using Telegram significantly improve Iranian dentistry PhD applicants' academic vocabulary knowledge and retention?

3. What is the Iranian dentistry PhD applicants' attitude towards learning academic vocabulary by using Telegram?

3. Method

3.1. Research Design

This study employed a quantitative approach using a pretest-posttest quasi-experimental design, featuring one control group and two experimental groups. In this study, DA was the independent variable, and vocabulary learning and retention were the dependent variables.

3.2. Participants

In this study, 60 Iranian dentistry applicants at Isfahan Azad University took part in the Oxford Quick Placement Test (OQPT), and 30 intermediate ones were chosen based on their scores. Also, they had already received an average of three English courses instruction at the university, considering their scores on their final exams, and were considered intermediate students based on OQPT guidelines. Randomly, they were assigned to three equal groups of control (CG), DA without using Telegram (DWTG), and DA using Telegram (DUTG) groups. Each group consisted of 10 learners. Table 1 shows the participants' demographic background.

Table 1

Demographic Background of the Participants

Number of Students	30
Gender	Male & Female
Native Language	Persian
Major	Dentistry
University	Islamic Azad University, Isfahan Branch, Isfahan, Iran
Academic Years	2023-2024

3.3. Instruments

The Instruments and Materials used to conduct this study were as follows:

3.3.1. Oxford Quick Placement Test (OQPT)

Prior to conducting the research, the OQPT was utilized to assess the participants' overall understanding of the English language. It is a dependable and effective tool for teachers to

place students at the beginning of a course (Allan, 2004). It includes 60 multiple-choice items which evaluate the learner's grasp of grammar, vocabulary, and reading comprehension.

3.3.2. Vocabulary Assessment (Pretest, Posttest, and Delayed Posttest)

To conduct the study, a pretest was administered to both the experimental and control groups to assess their dentistry-specific knowledge of vocabulary. A vocabulary test of 40 multiple-choice items, taken from the book "English for the Students of Dentistry" by Tahririan and Mehrabi (2014) was selected. This book specifically targets dentistry students and includes words relevant to their field of study. The selected words were academic and deemed important for PhD candidates. The test underwent a pilot study to assess its reliability using the KR-21 formula, which resulted in a reliability coefficient of .85. Six experienced university lecturers, familiar with the book, confirmed the validity of the test. However, some words were found to be difficult for students to understand and memorize. Then the posttest, the modified version of the same test as the pretest, was developed to measure vocabulary improvement and make comparisons between groups, thus evaluating the effectiveness of the method.

3.3.3. Questionnaire

A researcher-designed questionnaire was administered to the participants of the DUTG to assess their points of view towards using Telegram for learning English vocabulary. The questionnaire includes 15 Likert-scale items, and participants were asked to select one of five options to express their opinions. The questionnaire's reliability was measured using Cronbach's Alpha, which showed high reliability with a coefficient of 0.87.

3.4. Procedures

The research was conducted over 10 sessions, each lasting two hours. During each session, 25 words were presented to all three groups (CG, DWTG, and DUTG) through narrow reading, which involved repeated reading of thematically related short texts. The CG and DWTG received vocabulary instruction using regular methods, while the DUTG received instruction through Telegram. The study consisted of three main steps: the pretest, treatment along with immediate posttest (posttest 1), and delayed posttest (posttest 2). The duration of teaching was equally the same for all three groups. The pretest was administered before the main study to

evaluate participants' vocabulary knowledge and ensure they were at the same level. Selected texts with various vocabulary exercises were given to the CG, while the DWTG used the same teaching method but underwent DA to evaluate their vocabulary knowledge and improvement. In the DUTG, words and related exercises were posted on a Telegram group, and participants completed the exercises with feedback provided by the researcher, who served as the group admin. The same assessment material used for the DWTG was also used for the DUTG. The Learning Potential Assessment Device (LPAD) model of DA was employed, focusing on evaluating the learning process and identifying cognitive functions, operations, and problem-solving strategies. The LPAD emphasizes dynamic potential and mediation between the evaluator and the student. To measure short-term improvement, the first posttest was administered, using the same test as the pretest. The delayed posttest (posttest 2) was administered to assess vocabulary retention and long-term improvement two weeks later.

3.5. Data Analysis

To assess the normality of the data obtained from the research instruments, the Shapiro-Wilk test was employed. The Shapiro-Wilk test was selected due to its suitability for small sample sizes. The results of the normality assessment indicated that the data for all measures followed a normal distribution, as evidenced by p-values exceeding 0.05. Consequently, parametric tests were deemed appropriate for the subsequent analysis.

Table 2

Results of the Shapiro-Wilk Test for Normality of Data

	Shapiro-Wilk		
	Statistic	df	Sig.
OQPT	0.946	30	0.210
Pre-test	0.962	30	0.792
Post-test	0.958	30	0.740
Delayed Posttest	0.972	30	0.912
Questionnaire	0.903	10	0.226

The Shapiro-Wilk test results, as presented in Table 2, indicated no statistically significant deviations from normality for any of the measures ($p > 0.05$). Therefore, the assumption of

normality was considered tenable, allowing for the use of parametric tests in the data analysis. A one-way ANOVA was conducted to address the first two research questions, while a one-sample t-test was used to analyze the questionnaire data. The specific findings from these analyses will be detailed in the following section.

4. Results

4.1. Addressing Research Questions One and Two

These two research questions determined the effects of DA and Telegram on the learning and retention of academic vocabulary by Iranian dentistry PhD applicants. Therefore, the researcher compared the participants' scores on the posttest and delayed posttest.

Table 3

Descriptive Statistics of the Pretest Result

	N	Mean	*Std.* Deviation	*Std.* Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
CG	10	22.50	.972	.307	21.80	23.20	21	24
DWTG	10	21.90	1.912	.605	20.53	23.27	20	24
DUTG	10	22.30	1.767	.559	21.04	23.56	20	25
Total	30	22.23	1.569	.286	21.65	22.82	20	25

Table 3 presents the mean scores for CG (M = 22.50), DWTG (M = 21.90), and DUTG (M = 22.30). The data revealed no significant differences among the mean scores. To confirm this, a one-way ANOVA analysis was done to ensure that there was no statistically significant variance among the groups.

Table 4

Results of the One-Way ANOVA for the Pretest

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	1.867	2	.933	.363	.699
Within Groups	69.500	27	2.574		
Total	71.367	29			

The results of Table 4 indicate no significant difference among the groups since the *p* value was greater than .05 ($p = .699$). Consequently, all participants possessed a similar level of vocabulary knowledge. To assess the impact of DA and Telegram on enhancing participants' vocabulary proficiency, their posttest scores were compared against each other.

Table 5

Descriptive Statistics of the Results of the Posttest

	N	Mean	*Std.* Deviation	*Std.* Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
CG	10	30.00	1.633	.516	28.83	31.17	27	32
DWTG	10	32.50	1.080	.342	31.73	33.27	31	34
DUTG	10	34.30	1.567	.496	33.18	35.42	30	35
Total	30	32.27	2.273	.415	31.42	33.12	27	35

Table 5 indicates the mean scores and standard deviations of CG ($M = 30$, $SD = 1.63$), DWTG ($M = 32.50$, $SD = 1.08$), and DUTG ($M = 34.30$, $SD = 1.57$) on the posttest. The findings highlighted the differences among the mean scores of the three groups on the test. A one-way ANOVA was conducted to figure out whether these differences were significant or not.

Table 6

Results of the One-Way ANOVA for the Posttest

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	93.267	2	46.633	22.246	.000
Within Groups	56.600	27	2.096		
Total	149.867	29			

According to Table 6, significant differences were found among the groups since the *p* value was lower than .05 ($p < .001$). The Bonferroni test was conducted as a post hoc analysis to precisely determine what groups were different from each other.

The results of Table 7 indicate a significant difference between CG and DWTG ($p = .002$), CG and DUTG ($p < .001$), and DWTG and DUTG ($p = .029$). Therefore, it can be concluded that DA had a significant effect on improving the students' vocabulary knowledge.

In addition, employing Telegram significantly improved the participants' vocabulary knowledge. The findings are also shown in Figure 1.

Table 7

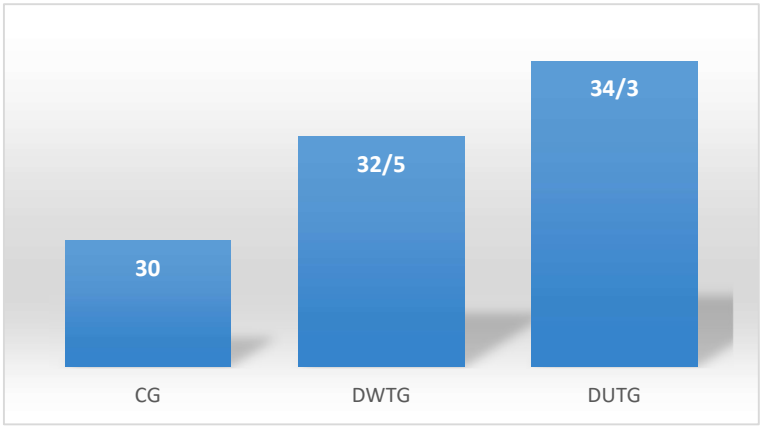
Results of the Bonferroni Test for Comparing the Mean Scores of the Groups on the Posttest

(I) Groups	(J) Groups	Mean Difference (I-J)	*Std.* Error	*Sig.*	95% Confidence Interval	
					Lower Bound	Upper Bound
CG	DWTG	-2.500*	.648	.002	-4.15	-.85
	DUTG	-4.300*	.648	.000	-5.95	-2.65
DWTG	CG	2.500*	.648	.002	.85	4.15
	DUTG	-1.800*	.648	.029	-3.45	-.15
DUTG	CG	4.300*	.648	.000	2.65	5.95
	DWTG	1.800*	.648	.029	.15	3.45

* The mean difference is significant at the 0.05 level.

Figure 1

Mean Scores of the Groups on the Posttest



Participants' scores on the posttest were compared with one another to scrutinize the effects of DA and Telegram on improving their vocabulary retention.

Table 8

Descriptive Statistics of the Results of the Delayed Posttest

	N	Mean	*Std.* Deviation	*Std.* Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
CG	10	25.70	1.252	.396	24.80	26.60	23	27
DWTG	10	27.40	1.506	.476	26.32	28.48	25	29
DUTG	10	29.00	.816	.258	28.42	29.58	28	30
Total	30	27.37	1.810	.330	26.69	28.04	23	30

Table 8 shows the mean scores and standard deviations of CG (M = 25.70, SD = 1.25), DWTG (M = 27.40, SD = 1.51), and DUTG (M = 29, SD = .82) on the delayed posttest. The results indicated the differences among the mean scores of the three groups on the test. A one-way ANOVA was done to figure out if these differences were significant.

Table 9

Results of the One-Way ANOVA for the Delayed Posttest

	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
Between Groups	54.467	2	27.233	18.156	.000
Within Groups	40.500	27	1.500		
Total	94.967	29			

According to Table 9, there were significant differences among the groups since the p value was lower than .05 ($p < .001$). The Bonferroni test was conducted as a post hoc analysis to figure out precisely what groups were different from each other.

The results of Table 10 indicate a significant difference between CG and DWTG (p = .013), CG and DUTG ($p < .001$), and DWTG and DUTG (p = .021). Accordingly, it can be concluded that DA had a significant effect on improving the participants' vocabulary retention. In addition, employing Telegram significantly improved the participants' vocabulary retention. The findings are also depicted in Figure 2.

Table 10

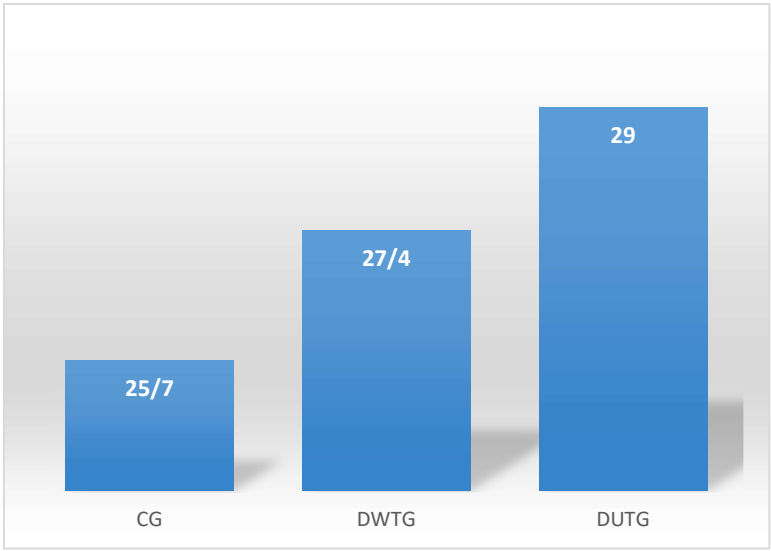
The Results of the Bonferroni Test for Comparing the Mean Scores of the Groups on the Delayed Posttest

(I) Groups	(J) Groups	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
CG	DWTG	-1.700*	.548	.013	-3.10	-.30
	DUTG	-3.300*	.548	.000	-4.70	-1.90
DWTG	CG	1.700*	.548	.013	.30	3.10
	DUTG	-1.600*	.548	.021	-3.00	-.20
DUTG	CG	3.300*	.548	.000	1.90	4.70
	DWTG	1.600*	.548	.021	.20	3.00

* The mean difference is significant at the 0.05 level.

Figure 2

Groups' Mean Scores on the Delayed Posttest



4.2. Addressing Research Question Three

A one-sample t-test was conducted to analyze the results of the questionnaire which was administered to the participants of DUTG.

Table 11

Descriptive Statistics of the Results of the Questionnaire

	N	Mean	*Std.* Deviation	*Std.* Error Mean
Attitude	10	3.610	.3213	.1016

As illustrated in Table 11, the average score of participants' attitudes was 3.61, surpassing the set criterion of 3.00. This method evaluates the average score against a fixed value (in this analysis, 3.00, as the questionnaire choices ranged from 1 to 5 with an average of 3). These findings suggested that participants had a positive attitude towards learning vocabulary through Telegram. To determine if this positive attitude was statistically meaningful, it was important to assess the significance level (2-tailed) in the one-sample t-test.

Table 12

One-Sample t-Test Results for Participants' Attitude Scores

	Test Value = 3.00					
	t	*df*	*Sig.* (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Attitude	6.004	9	.000	.6100	.380	.840

Table 12 demonstrates a notable contrast between the participants' average attitude score (M = 3.61) and the standard value of the options (3) as the p-value was below the designated level of significance ($p < .001$). Therefore, it can be deduced that the participants held favorable views towards learning vocabulary via Telegram.

5. Discussion

Evaluating learners' performance is essential, but traditional static assessment methods have faced criticism for their limitations. In EFL context, static assessment is viewed as a missed opportunity for learning, particularly in language acquisition. To address these shortcomings, new tendencies in language assessment have emerged. This research aimed to scrutinize the role of DA in the acquisition and retention of academic English vocabulary by Iranian PhD candidates in dentistry, utilizing the social platform Telegram.

The data analysis revealed that DA had a significant positive impact on participants' vocabulary knowledge and retention. Participants demonstrated improved word learning and more effective memorization. The questionnaire results indicated that participants held positive attitudes towards using DA and learning vocabulary through Telegram. These findings support previous studies that have shown the constructive role of DA in language learning and teaching. Similar positive attitudes towards learning vocabulary through Telegram were also found in studies conducted by other researchers.

Furthermore, the outcomes of this research align with the results of Saeidi and Hosseinpour's (2013) study in which the role of DA in vocabulary learning in general English classes and its positive impact on student performance was highlighted. DA goes beyond mere vocabulary testing by incorporating various evaluation methods such as projects, essays, and performances, which significantly enhance the teaching and learning quality. This approach provides an opportunity for active learning.

Implementing DA in English for Specific Purposes (ESP) classes increases learners' engagement and motivation, and reduces test anxiety. It allows teachers to gauge learners' understanding, identify areas where additional support is needed, and actively involve learners in the learning process. Consequently, DA can be effectively employed in English classes to enhance language education and improve learners' vocabulary knowledge (Hanifi et al., 2016).

MALL has been extensively studied in previous research (Ahmad, 2013; Chinnery, 2006; Khabiri & Bagher Khatibi, 2013; Traxler, 2009; Wagner, 2005; Wong & Looi, 2010), and most research studies have demonstrated the beneficial impact of using Telegram on enhancing learners' overall English proficiency, particularly in terms of vocabulary. The current study's results are consistent with prior research, indicating that participants who utilized Telegram for vocabulary learning showed superior performance compared to those who did not.

Also, the research results corroborate the findings of Yunus et al. (2013), who highlighted the benefits of using information and communication technology (ICT) in English classrooms. They found that ICT attracts learners' attention, facilitates vocabulary acquisition and memorization, and improves reading and writing abilities. The integration of mobile

applications in learning allows learners to connect language and content, providing opportunities for enhanced language learning (Yassaei, 2012). This finding supports the notion that MALL, coupled with advancements in educational technology, can improve language learning among EFL learners, as confirmed by Wu et al. (2012).

Mobile devices offer learners a wide range of learning opportunities, overcoming the constraints of time and space. Learners can access vast amounts of information online, watch educational videos, listen to podcasts, and utilize electronic dictionaries on their mobile phones. Mobile devices also provide pronunciation support, enabling learners to listen to correct word pronunciation, and facilitating more effective learning and memorization. Social networks like Telegram foster knowledge sharing and collaboration among learners, further enhancing language learning motivation.

Furthermore, learners utilize their cell phones to listen to the accurate pronunciation of new words, enabling them to learn and memorize them more effectively. In addition, platforms such as Telegram offer learners the chance to exchange ideas and knowledge, thereby enhancing their English proficiency. Hence, MALL serves as a motivational tool for EFL learners, as evidenced by the findings of the current study and supported by several prior studies (Khodashenas & Amouzagar, 2013; Kukulska-Hulme & de los Arcos, 2011; Mosavi Miangah & Nezarat, 2012). As the previous studies indicate, DA emphasizes the interactive learning process which makes learners aware of their potential and is also effective and helpful for learning skills and subskills.

6. Conclusion

Implementing DA in EFL classes encourages learners' engagement, boosts motivation, and reduces test anxiety. It allows teachers to gauge learners' understanding, identify areas requiring additional support, and actively involve learners in the learning process. The learning and retention of vocabulary are effectively enhanced through DA. Additionally, the use of Telegram positively impacts EFL learners' vocabulary knowledge and retention, with learners displaying favorable attitudes towards learning vocabulary through the platform.

However, the study faced limitations. The unavailability of Telegram in Iran posed challenges for participants in the DUTG, as they were unable to join the class conveniently, potentially affecting the results. Time constraints limited the researchers' ability to teach the same content to both the DUTG and DWTG, leading to limitations in individual learner evaluation. A smaller sample size was chosen due to time limitations, impacting the generalizability of the statistical results. Some participants were hesitant to participate in class activities, making it difficult to assess their performance dynamically. Due to the limited number of dentistry applicants at the desired level, 30 participants were selected (10 per group). Conducting this study with a larger sample size (at least 20 per group) would likely yield more impactful and generalizable results.

The findings of this study offer valuable insights for EFL test constructors, educational administrators, teachers, syllabus designers, curriculum planners, materials developers, and EFL learners seeking to improve their language proficiency. It is crucial for all students to evaluate their strengths and weaknesses.

Future studies can duplicate this research with diverse participants in various settings. The effect of DA on language skill acquisition and other linguistic components can be analyzed separately. While this study concentrated on intermediate learners, it can be broadened to encompass learners at various skill levels. Gender disparities can also be investigated by separately analyzing the performance, vocabulary retention, and attitudes of males and females when using DA.

Conflict of interest

The author certifies that she has no affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in the present research paper.

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