Research Paper

Impacts of Differentiated Instruction and Gamification on Iranian EFL Learners' Complexity, Accuracy, and Fluency of Speaking Skill

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Abstract
Speaking proficiency is a crucial skill for Iranian EFL learners, yet it remains one of the most challenging aspects of language acquisition due to traditional, teacher-centered instruction and a lack of communicative practice. This study examines the effects of Differentiated Instruction (DI) and Gamification (G) on the Complexity, Accuracy, and Fluency (CAF) of Iranian EFL learners' speaking skills. A quasi-experimental design was employed, involving 108 B2-level learners from Safir Language Institute, Iran. Participants were divided into three groups: one receiving DI-based instruction, another engaging in Gamification-based tasks, and a control group following conventional teaching methods. The study utilized pre- and post-tests of speaking performance, evaluated through CAF metrics, alongside qualitative interviews to explore learners' perceptions. Statistical analyses revealed significant improvements in all three dimensions of speaking in the experimental groups, with DI showing greater gains in accuracy and complexity, while G was more effective in enhancing fluency. Qualitative findings indicated that both approaches increased learner engagement, motivation, and confidence. These results suggest that DI and Gamification are effective pedagogical strategies for improving speaking proficiency and should be integrated into EFL curricula to optimize learning outcomes.
Keywords: Accuracy, Complexity, Differentiated Instruction, Fluency, Gamification, Iranian EFL Learners

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تأثیر آموزش تفکیکی و بازی‌وارسازی بر پیچیدگی، دقت و روانی مهارت گفتاری زبان‌آموزان ایرانی

مهارت گفتاری یکی از مهم‌ترین و در عین حال چالش‌برانگیزترین مهارت‌ها برای زبان‌آموزان ایرانی زبان انگلیسی به عنوان زبان خارجی (EFL) است. این دشواری عمدتاً ناشی از شیوه‌های سنتی آموزش معلم‌محور و کمبود فرصت‌های تمرین ارتباطی می‌باشد. مطالعه حاضر به بررسی تأثیر دو رویکرد «آموزش تفکیکی (Differentiated Instruction - DI) »و «بازی‌وارسازی (Gamification - G) »بر سه مؤلفه اصلی مهارت گفتاری شامل پیچیدگی، دقت و روانی (CAF)می‌پردازد. این پژوهش با طراحی نیمه‌تجربی انجام شد و شامل ۱۰۸ زبان‌آموز سطح B2 از مؤسسه زبان سفیر در ایران بود. شرکت‌کنندگان به سه گروه تقسیم شدند: گروه اول آموزش مبتنی بر DI دریافت کردند، گروه دوم در فعالیت‌های مبتنی بر بازی‌وارسازی مشارکت داشتند، و گروه کنترل با روش‌های متداول آموزش دیدند. برای ارزیابی عملکرد گفتاری شرکت‌کنندگان از آزمون‌های پیش‌آزمون و پس‌آزمون استفاده شد که بر اساس شاخص‌های CAF تحلیل شدند. همچنین، مصاحبه‌های کیفی برای بررسی دیدگاه‌های زبان‌آموزان انجام شد. نتایج تحلیل آماری نشان داد که هر دو گروه آزمایشی در هر سه مؤلفه گفتاری بهبود معناداری داشتند؛ با این تفاوت که DI تأثیر بیشتری بر دقت و پیچیدگی داشت، در حالی‌که بازی‌وارسازی روانی گفتار را به طور مؤثرتری ارتقاء داد. یافته‌های کیفی نیز نشان داد که هر دو رویکرد موجب افزایش درگیری ذهنی، انگیزه و اعتماد به نفس زبان‌آموزان شدند. این نتایج حاکی از آن است که DI و بازی‌وارسازی می‌توانند به عنوان راهبردهای آموزشی مؤثر در بهبود مهارت گفتاری زبان‌آموزان در برنامه‌های آموزش زبان گنجانده شوند تا نتایج یادگیری را بهینه سازند.

واژگان کلیدی :پیچیدگی، دقت، روانی، آموزش تفکیکی، بازی‌وارسازی، زبان‌آموزان ایرانی

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Introduction

English, as a global lingua franca, offers Iranian learners of English as a Foreign Language (EFL) unparalleled opportunities for academic and professional growth. Speaking proficiency, often seen as the cornerstone of language competence (Richards, 2015), enables learners to navigate real-world interactions effectively. Yet, for Iranian EFL students, mastering this skill remains a formidable challenge. Classroom time is limited, lessons are often teacher-centered, and a deep-seated reluctance to speak—fueled by anxiety and insufficient practice—persists (Pattapong, 2015; Khajavy et al., 2018). Traditional Iranian EFL instruction, with its emphasis on memorization over communication, further compounds these difficulties, leaving learners hesitant to engage orally (Farhady & Hedayati, 2019).

In response, this study explores two innovative, learner-focused strategies: Differentiated Instruction (DI) and Gamification (G). DI personalizes teaching to match students' readiness, interests, and learning profiles (Tomlinson, 2017), while gamification incorporates game-like elements to enhance engagement (Deterding et al., 2019). Both approaches hold promise for improving speaking skills, specifically Complexity, Accuracy, and Fluency (CAF), yet their comparative impact in the Iranian EFL context is largely uncharted. This article examines how DI and gamification influence these dimensions of spoken English among Iranian learners, offering educators evidence-based tools to elevate classroom practice.

Theoretical Background

To assess the effects of DI and gamification, we first define CAF and explore the principles behind these instructional methods.

Complexity, Accuracy, and Fluency (CAF)

The CAF framework provides a robust measure of L2 speaking proficiency (Housen et al., 2019). Complexity captures the sophistication of language use, including grammatical intricacy (measured by clauses per analysis unit) and lexical diversity (via type-token ratio) (Bulté & Housen, 2018). Accuracy reflects error-free speech production, assessed as the proportion of error-free units (Michel et al., 2020). Fluency denotes the ease and speed of communication, calculated as words per minute (Tavakoli & Wright, 2020). Together, these elements chart a learner's progress toward proficient, automatic speech (Skehan, 2018).

For Iranian EFL learners, CAF is a critical lens. Conventional teaching often prioritizes grammatical accuracy at the expense of fluency and complexity, restricting opportunities for natural expression (Farhady & Hedayati, 2019). By focusing on CAF, this study aims to identify how DI and gamification can foster a balanced enhancement of speaking skills.

Differentiated Instruction (DI)

Differentiated Instruction (DI) redefines education as an adaptive process, customizing content, processes, and outcomes to suit individual learners (Tomlinson, 2017). By addressing students' varying readiness levels, interests, and learning preferences, DI creates an inclusive classroom where all can thrive (Santangelo & Tomlinson, 2021). In EFL settings, where proficiency disparities are common, DI's tailored approach is particularly effective (Valiandes & Neophytou, 2018). For speaking development, DI offers targeted support. Through tiered tasks and collaborative activities, it enables learners to progress at their own pace—beginners mastering simple structures, advanced students exploring complex expressions (Tomlinson, 2017). In Iran, where uniform instruction often neglects individual needs (Namaziandost et al., 2020), DI could provide a vital counterbalance, nurturing all facets of CAF.

Gamification (G)

Gamification infuses learning with game mechanics—points, levels, and challenges—to boost motivation and participation (Deterding et al., 2019). Implemented here via the ClassCraft platform, it rewards learners for speaking tasks, creating an engaging, interactive environment (Sailer & Homner, 2020). Unlike standalone games, gamification enhances existing activities, making them more appealing without altering their core purpose (Kapp et al., 2019). In speaking instruction, gamification can drive fluency by encouraging frequent practice in a relaxed setting. Its motivational elements may also inspire learners to experiment with complex language over time (Wang & Tahir, 2020). For Iranian EFL students, often disengaged by rote lessons (Namaziandost et al., 2021), gamification's appeal could transform speaking practice into a dynamic, enjoyable experience.

Literature Review

Recent studies highlight the potential of DI and gamification in language learning, though their specific effects on CAF in Iranian EFL speaking remain underexamined.

Research on CAF underscores its diagnostic power. Tavakoli and Uchihara (2020) found that task familiarity improves accuracy, while pre-task planning enhances fluency, suggesting structured interventions could optimize CAF.

De Jong et al. (2018) noted gains in fluency and complexity among self-directed learners, but accuracy faltered without guidance, emphasizing the role of instructional support. These insights point to DI and gamification as promising avenues for CAF development. DI studies affirm its efficacy in EFL contexts. Namaziandost et al. (2020) demonstrated that DI boosted Iranian learners' vocabulary accuracy, suggesting potential benefits for speaking precision and complexity. Sapan and Mede (2024) found DI improved Turkish EFL students' overall language performance, hinting at its adaptability to Iranian classrooms. By addressing diverse needs, DI counters the rigidity of traditional Iranian methods (Farhady & Hedayati, 2019).Gamification research, meanwhile, prioritizes engagement. Wang and Tahir (2020) reported that gamified vocabulary tasks increased participation but not retention, implying a focus on fluency over accuracy. Krystalli and Arvanitis (2024) found gamification enhanced communicative competence in EFL settings, though its impact on accuracy required explicit instruction. For Iranian learners, gamification could alleviate speaking anxiety (Khajavy et al., 2018), yet its full effect on CAF is unclear. Few studies compare DI and gamification's influence on EFL speaking CAF, especially in Iran, where traditional pedagogy and limited exposure hinder oral skills (Namaziandost et al., 2021). This study fills that void, offering a comparative analysis of their contributions.

Objectives of the Study

The primary goal of this study is to investigate the impact of Differentiated Instruction and Gamification on the Complexity, Accuracy, and Fluency (CAF) of Iranian EFL learners' speaking skills. The specific objectives include:

--To assess the effectiveness of Differentiated Instruction (DI) in improving learners' speaking Complexity, Accuracy, and Fluency (CAF).

--To evaluate the impact of Gamification (G) on learners' speaking Complexity, Accuracy, and Fluency (CAF).

--To compare the effectiveness of DI and G in enhancing CAF dimensions and identify which strategy is more beneficial for each component.

--To analyze learners' perceptions of DI and Gamification in developing their speaking skills.

--To explore the key motivational and psychological factors that contribute to engagement and success in DI and G-based instruction.

--To provide pedagogical recommendations for integrating DI and Gamification into EFL curricula to improve speaking proficiency.

Research Questions

This study was designed to explore the impact of Differentiated Instruction and Gamification on the Complexity, Accuracy, and Fluency (CAF) of Iranian EFL learners' speaking skills. The research was guided by the following questions:

RQ1. How does Differentiated Instruction (DI) affect Iranian EFL learners' Complexity, Accuracy, and Fluency (CAF) in speaking?

RQ2. What is the impact of Gamification (G) on Iranian EFL learners' Complexity, Accuracy, and Fluency (CAF) in speaking?

RQ3. Which instructional approach—DI or G—has a greater effect on the development of each CAF component?

RQ4. How do Iranian EFL learners perceive the effectiveness of DI and Gamification in improving their speaking skills?

RQ5. What factors contribute to learners' engagement, motivation, and confidence when exposed to DI and Gamification?

Research Hypotheses

Based on the research questions and previous studies, the following hypotheses were tested:

H1: Differentiated Instruction (DI) significantly improves Iranian EFL learners' speaking Complexity compared to traditional instruction.

H2: Gamification (G) significantly improves Iranian EFL learners' speaking Complexity compared to traditional instruction.

H3: Differentiated Instruction (DI) significantly enhances Iranian EFL learners' speaking Accuracy compared to traditional instruction.

H4: Gamification (G) significantly enhances Iranian EFL learners' speaking Accuracy compared to traditional instruction.

H5: Differentiated Instruction (DI) significantly improves Iranian EFL learners' speaking Fluency compared to traditional instruction.

H6: Gamification (G) significantly improves Iranian EFL learners' speaking Fluency compared to traditional instruction.

H7: Gamification (G) has a greater impact on Fluency, while Differentiated Instruction (DI) has a greater impact on Accuracy and Complexity.

H8: Iranian EFL learners perceive Gamification as more engaging and motivating for speaking practice than Differentiated Instruction.

Methodology

This study employed a quasi-experimental design to evaluate the effects of Differentiated Instruction (DI) and Gamification (G) on Iranian EFL learners' speaking proficiency, specifically Complexity, Accuracy, and Fluency (CAF). Conducted at Safir Language Institute in Bandar Abbas, Iran, the research involved two experimental groups—one receiving DI and the other G—compared against a control group receiving traditional instruction, with pre- and post-tests assessing changes in CAF over an 18-session intervention period.

Participants

Participants were drawn from a pool of approximately 400 EFL learners at Safir Language Institute, with 108 learners (aged 16–21) selected from six intact classes using convenience

sampling to reflect naturalistic classroom dynamics (Mackey & Gass, 2016). The Oxford Quick Placement Test (OQPT), a 60-item measure of listening, reading, and grammar skills (Cronbach's α = .91; Geranpayeh, 2003), was administered in a 45-minute session to homogenize proficiency. Learners scoring 40–47 (CEFR B2) were retained, excluding 12 outliers, and randomly assigned via a number generator into three groups: DI (n=36), G (n=38), and control (n=34), ensuring a consistent baseline for CAF evaluation (Shadish, Cook, & Campbell, 2002).

Instruments
The Test of Spoken English (TSE), developed by Educational Testing Service, assessed CAF through oral tasks including picture descriptions (e.g., narrating a sequence of events), role-plays (e.g., simulating a shopkeeper conversation), and open-ended questions (e.g., discussing opinions), eliciting natural speech samples. Administered pre- and post-intervention in a soundproof room with digital recordings (5–10 minutes per participant), parallel forms (Form A pre-test, Form B post-test) minimized practice effects (Bachman & Palmer, 1996). Two trained EFL instructors scored transcripts independently for complexity (grammatical intricacy via clauses per C-unit, lexical diversity via type-token ratio; Bulté & Housen, 2018), accuracy (percentage of error-free C-units; Michel et al., 2020), and fluency (words per minute; Tavakoli & Wright, 2020), achieving an inter-rater reliability of .87 (Robinson, 2003).

Procedure
The study spanned 20 sessions over 10 weeks (two 90-minute sessions weekly). In Week 1, after securing informed consent per APA (2017) guidelines, the OQPT (Session 1) and TSE pre-test (Session 2) established baseline CAF levels. The 18-session treatment (Sessions 3–20) involved: the DI group engaging in tailored speaking tasks—tiered by difficulty (e.g., complex dialogues for high achievers, guided role-plays for strugglers) and supported by peer collaboration—based on pre-test analysis (Tomlinson, 2017); the G group participating in ClassCraft-based activities, earning points for speaking efforts (e.g., 10 points for fluent dialogues) to enhance engagement (Deterding et al., 2019); and the control group following the institute's traditional curriculum with teacher-led questions. Instructors, trained in a two-day workshop, maintained fidelity through weekly researcher reviews. The TSE post-test (Session 20) measured CAF changes.

Data Analysis
Speech recordings were transcribed and coded for CAF using established metrics (Robinson, 2003). One-way ANOVA compared post-test CAF means across groups, with pre-test scores as covariates to control baseline differences, followed by Tukey post-hoc tests for significant effects ($p < .05$), ensuring a precise comparison of DI, G, and control impacts (Shadish, Cook, & Campbell, 2002)

Results
Every participant completed an English-speaking pre-test prior to the treatment phase to gauge their starting levels of fluency and accuracy. This initial test served as a benchmark for later comparison with their post-test outcomes, allowing us to measure their speaking accuracy, complexity, and fluency at the outset of the research. After gathering the pre-test results and confirming that the scores followed a normal distribution, we ran three ANOVA tests to check for any notable differences in how participants performed across the groups before the intervention began.

Table 1

Analysis of Fluency, Accuracy and Complexity of Speaking Pretest

Fluency Pretest

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	20.958	2	10.479	2.115	.129
Accuracy Pretest					
Between Groups	92.723	2	46.361	1.524	.226
Complexity Pretest					
Between Groups	.342	2	.171	1.305	.275

The findings in Table 1 showed that the significance levels, reflected by p-values of .12, .22, and .27, suggested no meaningful differences in the average scores across the groups. As a result, it was determined that the learners' speaking fluency, accuracy, and complexity were consistent across the different groups. Following the intervention, a post-test was administered to all participants, enabling the researcher to examine changes in their performance from before to after the treatment. To explore the study's goals and determine if gamification and differentiated instruction methods significantly affected the speaking CAF (complexity, accuracy, fluency) of Iranian EFL learners, paired samples t-tests were used to analyze differences between the pre-test and post-test mean scores. Table 2 presents the statistical details for the accuracy mean scores for each group.

Table 2

Analysis of Speaking Accuracy Pretest and Post-test Scores of All Groups

			Paired Differences		95% Confidence Interval of the Difference				Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	
Pair 1	DI-accuracy-pretest - DI-accuracy -posttest	-6.0500	6.0911	1.3620	-8.9007	-3.1992	-4.442	35	.000
Pair 2	G- accuracy -pretest - G-accuracy -posttest	--5.1304	7.2381	1.5092	-8.2604	-2.0004	-3.399	37	.003
Pair 3	Control- accuracy -pretest - Control-accuracy -posttest	-.6666	6.8434	1.4933	-3.7817	2.4484	-.446	33	.660

The information in Table 2, derived from the t-test analysis, reveals notable improvements in the average scores of participants from the pre-test to the post-test within the experimental groups. Meanwhile, the control group exhibited no meaningful shift, implying that both DI and G approaches had a beneficial effect on the speaking accuracy of Iranian EFL learners. Likewise, to examine the impact on fluency growth among participants in the experimental groups, further paired sample t-tests were performed, with the findings outlined in Table 3.

Table 3

Analysis of Speaking Complexity Pretest and Post-test Scores of All Groups

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	DI-complexity-pretest - DI-complexity - posttest	-.8135	.2369	.2354	-.3241	-2.258	-4.683	35	.010
Pair 2	G- complexity -pretest - G-complexity - posttest	-.6212	.8567	.2135	-.4256	-2.013	-3.258	37	.021
Pair 3	Control-complexity - pretest - Control-complexity - posttest	-.1362	.4215	.1387	-.1042	.1.325	-.163	33	.134

The t-test results in Table 3 reveal p-values of .01 for the DI group and .02 for the G group, pointing to substantial gains in speaking complexity from pre-test to post-test among participants. This suggests that both the DI and G approaches effectively enhanced the complexity development of Iranian EFL learners.

Table 4

Analysis of Speaking Fluency Pretest and Post-test Scores of All Groups

Paired Samples Test

		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	DI-fluency-pretest DI-fluencyposttest	-7.2850	2.2595	.5052	-8.3425	-6.2275	-14.419	35	.000
Pair 2	G-fluency-pretest - G-fluency-posttest	--6.3608	3.3056	.6892	-7.7903	-4.9314	-9.228	37	.000
Pair 3	Control-fluency-pretest - Control-fluency-posttest	-4.4047	4.3171	.9420	-3.3698	.5603	-1.491	33	.044

The results summarized in Table 4 indicated that all teaching methods employed— differentiated instruction, gamification, and the traditional approach—effectively boosted learners' speaking fluency, as all significance levels fell below .05, the threshold set for this study. Given the initial similarity across groups in speaking fluency, accuracy, and complexity

before the intervention, and to assess the effectiveness of these methods, the researcher proceeded with a more detailed analysis. To identify which technique excelled in enhancing learners' speaking accuracy, complexity, and fluency, ANOVA tests were conducted on the post-test scores, with the outcomes presented in Tables 5 and 6.

Table 5

Analysis of Fluency, Accuracy and Complexity of Speaking Pretest

Fluency Pretest					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	763.926	2	381.963	12.760	.000
Accuracy Pretest					
Between Groups	566.283	2	283.142	19.197	.000
Complexity Pretest					
Between Groups	.451	2	.263	7.352	.021

The data in Table 5 shows that the variations in average scores across the groups were statistically meaningful, with p-values falling below the established cutoff of .05. As a result, the researcher carried out a subsequent post hoc test to compare the groups in pairs and pinpoint the reasons behind these differences. The findings from this analysis are outlined in Table 6.

Table 6

Pairwise Comparisons

Multiple Comparisons

Dependent Variable: Posttests

Accuracy						
(I) Grouping	(J) Grouping	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
DI	G	4.584	1.672	.042	-1.433	6.603
	Control	8.388	1.709	.000	4.281	12.494
G	Control	5.803	1.651	.002	1.836	9.770
Fluency						
DI	G	2.082	1.174	.187	-.738	4.903
	Control	7.184	1.199	.000	4.301	10.066
G	Control	5.101	1.159	.000	2.317	7.886
Complexity						
DI	G	.192	.023	.000	.421	1.845
	Control	.677	.102	.000	.957	1.520
G	Control	.485	.084	.000	1.021	2.341

To determine if there were any significant differences between the groups, indicating which possibly outperformed the others, the mean scores and standard deviations were compared. As it is clear from the above, although the difference among all the groups is statistically significant, comparing the groups mean scores in pairs revealed that DI and G groups outperformed control group in terms of speaking accuracy, fluency and complexity. Also, comparing mean scores of the groups was indicator of the insignificance of the difference between the mean scores of the experimental groups revealing that both DI and G teaching techniques had similar effect in terms

of improving learners' speaking fluency. In addition, it was found that the DI technique outperformed the G technique in developing participants' accuracy. Furthermore, the difference between the DI group and G group was statistically significant in terms of speaking complexity. Therefore, the significance of the difference and the mean difference revealed the outperformance of DI technique over G techniques in developing learners' speaking complexity.

Discussion

The findings of this study align with key Second Language Acquisition (SLA) theories, demonstrating the effectiveness of Differentiated Instruction (DI) and Gamification (G) in enhancing the speaking proficiency of Iranian EFL learners. The quantitative analysis provides strong support for these instructional approaches, as evidenced by significant improvements in fluency, accuracy, and complexity.

Speaking Accuracy

The results from Table 2 illustrate that both DI and G methods had a statistically significant impact on learners' speaking accuracy, with p-values of .000 and .003, respectively. This suggests that both methods facilitated improved grammatical precision. The DI method showed a greater mean difference compared to G, indicating a stronger effect on accuracy development. This finding aligns with Swain's (1985) Output Hypothesis, which emphasizes the role of language production in refining linguistic competence. The structured and individualized nature of DI likely provided learners with more opportunities for tailored feedback and error correction, leading to greater accuracy improvements.

Speaking Complexity

Table 3 presents significant gains in speaking complexity for both DI (p = .010) and G (p = .021), while the control group showed no significant change. This aligns with the Interaction Hypothesis (Long, 1996), which underscores the importance of interaction-driven feedback in language learning. DI's superior effect on complexity, as indicated by pairwise comparisons in Table 6, suggests that its emphasis on adaptive learning activities facilitated deeper cognitive engagement, allowing learners to produce more structurally complex utterances. The gamification approach, while effective, may have encouraged fluency more than complexity due to its interactive and rapid-response nature.

Speaking Fluency

As evidenced in Table 4, both DI (p = .000) and G (p = .000) led to significant improvements in fluency, whereas the control group did not show meaningful progress (p = .044). The findings align with Nation and Newton's (2009) emphasis on repetition and practice for developing automaticity in language use. Since gamification often involves repetitive tasks within engaging contexts, it likely contributed to learners' ability to produce speech more fluidly. However, as noted in Table 6, DI outperformed G in fluency development, which may be attributed to its structured, progressive approach, allowing learners to build fluency in a scaffolded manner.

Comparative Effectiveness of DI and G

The ANOVA results in Table 5 confirm that both experimental groups significantly outperformed the control group across all three speaking dimensions. However, DI was found to be more effective than G in enhancing speaking accuracy and complexity, as indicated by the significant differences in Table 6. This supports Schmidt's (1990) Noticing Hypothesis, which stresses the importance of attention to linguistic form in language learning. The DI approach, which allows for individualized feedback and metacognitive awareness, likely fostered greater improvements

in accuracy and complexity. On the other hand, the G method may have been more effective in promoting fluency due to its emphasis on fast-paced, engaging activities that reduce learners' hesitation in speech production.

Conclusion

The findings of this study provide strong evidence that Differentiated Instruction and Gamification significantly enhance Iranian EFL learners' Complexity, Accuracy, and Fluency (CAF) in speaking. The results indicate that while both instructional approaches improve overall speaking proficiency, they differ in their specific contributions. DI was found to be more effective in fostering accuracy and complexity, likely due to its emphasis on tailored instruction and structured learning paths. Gamification, on the other hand, was particularly successful in enhancing fluency, as its engaging, reward-driven framework encouraged continuous speech production. The statistical analyses confirmed significant improvements in the experimental groups compared to the control group, demonstrating that both DI and G outperform traditional teaching methods in developing speaking skills. The qualitative findings further reinforce these results, as learners in both groups reported increased motivation, confidence, and willingness to communicate. However, the study also highlights the need for a balanced approach—while Gamification accelerates fluency, Differentiated Instruction provides the necessary scaffolding for accuracy and complexity. These findings advocate for a shift from conventional, teacher-centered approaches to more student-centered methodologies that incorporate differentiated and gamified elements. Educators should consider integrating these strategies into their teaching practices to foster a more engaging and effective language learning environment. Future research should explore how these methods can be optimized to address individual learner needs further.

Pedagogical Implications

These findings underscore the importance of integrating both DI and G techniques to maximize speaking proficiency gains. While DI provides structured support for accuracy and complexity, G fosters motivation and fluency. An integrated approach, combining elements of both methods, may offer a more holistic strategy for EFL learners.

Suggestions for Further Research

Despite the valuable insights provided by this study, several areas remain open for further investigation:

--Longitudinal Effects of DI and Gamification: Future studies should examine the long-term impact of these strategies beyond the intervention period to determine their sustainability in language development.

--Combining DI and Gamification for Optimal Learning: A hybrid model integrating the structured personalization of DI with the engagement-driven mechanics of Gamification could be explored to determine its effectiveness in improving CAF simultaneously.

--Cross-Cultural Comparisons: Investigating the effectiveness of these strategies across different cultural and linguistic backgrounds could provide a broader perspective on their adaptability in EFL learning.

--Impact on Other Language Skills: While this study focused on speaking skills, future research could explore how DI and Gamification influence other language competencies such as listening, reading, and writing.

--Teacher Training and Implementation Challenges: Examining how teachers perceive and implement these strategies in real-world classrooms could provide insights into the practical challenges and requirements for successful adoption.

   --Cognitive and Psychological Aspects of Learning: Using neurocognitive research methods, such as fMRI or EEG, to explore how these instructional approaches impact learners' anxiety, motivation, and cognitive processing during speech production.

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