The impact of interactionist vs. interventionist dynamic assessment on writing fluency and complexity of young vs. adult IELTS candidates

Article info

Authors:

Leyli Kashef[1]
Nasser Ghafoori[2]
Akbar Valizadeh Oghani[3]
Azadeh Mehrpouyan[4]

Abstract

According to sociocultural theory, dynamic assessment (DA) merges instruction and assessment. This study attempted to compare the effects of interactionist versus interventionist DA on the writing fluency and complexity of adult versus young IELTS candidates in an international language school in Tehran with the age range of 15-48. One hundred and forty students (90 males and 50 females) who had enrolled in the IELTS preparation course in the spring of 2021 participated in this study. The study participants were divided into four groups namely, young interactionist, young interventionist, adult interactionist, and adult interventionist. The participants in all groups were homogenized based on the result of their performance in a standard version of Preliminary English Test (PET). During the eight-week treatment period, the interactionist groups were given writing tests followed by the instructor's feedback and guidance, while the interventionist groups received instructions and were given writing test samples without qualitative feedback. The pre-test and post-test comparisons among the four groups by Two Way ANCOVA showed that both young and adult individuals in the interactionist groups had a significant improvement in their writing performance compared to those in the interventionist group. In addition, the study revealed the significant impact of interactionist DA vs. interventionist DA on both young and adult participants' scores in both writing fluency and complexity post-test. Likewise, the results showed no statistically significant interaction between the type of assessment and the candidates' age. The study presents pedagogical implications for teachers, students, and IELTS preparation program designers.

1. English Department, Sarab Branch, Islamic Azad University, Sarab, Iran.
2. English Department, Tabriz Branch, Islamic Azad University, Tabriz, Iran, (Corresponding Author): Ghafoori@iaut.ac.ir.
3. Department of Management, Sarab Branch, Islamic Azad University, Sarab, Iran.
4. Department of English Literature, Velayat University, Iranshahr, Iran.

1. Introduction

Dynamic assessment (DA) has emerged as a valuable tool for addressing challenges encountered by foreign or second language (L2) learners. It seamlessly blends instruction and assessment, reflecting the intertwined nature of teaching, learning, and evaluation (Lantolf & Thorne, 2006; Leung, 2007; Poehner & Infante, 2015; Poehner & Lantolf, 2005; Shrestha & Coffin, 2012). Different models of DA have accelerated the simultaneous teaching and assessment of various language skills, such as reading comprehension, writing, speaking, and listening (Malmir, 2020). Rooted in Vygotsky's sociocultural approach to education, DA holds promise in uncovering and addressing learners' needs (Leung, 2007; Poehner & Lantolf, 2005).

Among the models of DA, two have gained prominence in the literature: the 'interventionist' and 'interactionist' approaches. These models offer distinct perspectives on mediation and assessment. The 'interventionist' model, influenced by Vygotsky's early work in intelligence testing, employs standardized mediation for all learners (Lantolf & Poehner, 2004; Fulcher, 2010). In contrast, the 'interactionist' paradigm is characterized by frequent evaluations of the learner's current level of growth and an emphasis on direct interaction between the assessor or mediator and the learner (Lantolf & Poehner, 2004). Despite criticisms of the 'interactionist' approach, which question its ability to differentiate between learners' comprehension and the assessor's impact, it aligns more closely with Vygotsky's original theories and the concept of the Zone of Proximal Development (ZPD) (Budoff, 1987; Minick, 1987).

The flexibility offered by DA has revolutionized the assessment of individuals' linguistic abilities. Studies have explored DA's application in different language skills and components (Abdolrezapour, 2017; Ableeva, 2010; Ahmadi Safa & Rozati, 2017; Alavi & Taghizadeh, 2014; Aljaafreh & Lantolf, 1994; Anton, 2009; Kozulin & Garb, 2004; Poehner, 2005). However, despite the recognized potential of DA in teaching English skills, its application to writing skills remains relatively unexplored (Ajideh & Nourdad, 2012; Birjandi et al., 2013; Kushki et al., 2022; Pishghadam & Barabadi, 2012; Saeidi & Hosseinpour, 2013).

Writing is particularly challenging for L2 learners due to the complex interaction between the writer and reader, requiring specialized instruction (Irwin & Liu, 2019; Kushki

et al., 2022). Traditional corrective approaches in writing instruction, such as red-pen corrections, have raised concerns among scholars. There is a perception that students may not effectively absorb feedback from teachers, leading to questions about its utility (Guenette, 2007; Valero et al., 2008; Ferris, 2004; Lee, 1997; Truscott, 1996; Zamel, 1985). As a result, there is a need for more effective feedback techniques in writing instruction.

Another factor which has been considered effective in benefiting from dynamic assessment in EFL classrooms is age (Lidz, 1987; Malmeer & Zoghi, 2014; Poehner & Wang, 2021; Zohoor et al., 2021). In his research on the cognitive development of children, Vygotsky (1998) discovered that with assistance, a two-year-old child can exhibit the same level of ability as a seven-year-old child. He asserted that current evaluation models would resemble a hollow medical diagnosis, where a doctor's role is just to restate the patient's recognized problem using scientific terminology. DA, an acronym coined by Luria in 1961, aims to accomplish this goal, as proposed by Vygotskey. The term DA, which originated from the study of young children, is still uncertain in its ability to impact both young and adult learners to the same degree (Azizi& Namaziandost, 2023; Poehner & Wang, 2021). Recognizing this issue can illuminate the field of language pedagogy and open up new possibilities for future research. Therefore, this study aimed to bridge this gap by investigating the efficiency of interventionist and interactionist DA models in enhancing writing skills for IELTS candidates.

Lev Vygotsky's sociocultural theory (SCT), sometimes called the theory of mind, provided the theoretical underpinning for the current DA investigation (Poehner & Wang, 2021). Cognitive and higher-level mental function development is the foundation of SCT. The foundation of dynamic evaluation may be found in Vygotsky's works on the zone of proximal development (ZPD), which have been extensively studied in the fields of education and psychology. DA stands out from other assessment methods because it emphasizes the importance of guiding questions, hints, and prompts to the examinee's performance throughout the assessment process. This helps to understand his or her abilities and encourages development while the assessment is being conducted (Lantolf & Poehner, 2014). In addition, as Lantolf and Poehner (2004) contend, DA takes into consideration the quantity and type of examiner investment and places an emphasis on

the learning process. Additionally, DA holds that cognitive capacities may be shaped and that there exists a zone of proximal development that separates latent capacity from actually acquired ability (Daneshfar & Moharami, 2018).

Despite the widespread acknowledgment of DA's potential, research on its effectiveness, particularly in high-stakes tests like IELTS, remains limited. IELTS candidates are expected to gain mastery over different language skills and get ready for the test in a relatively short time. They have already got familiar with the English language, but their mastery over language skills requires their efficient learning and L2 development, which in turn bound to their ability to make use of dynamic assessment to recognize their weaknesses and enhance their strengths. Furthermore, there is a paucity of studies examining the interactionist and interventionist DA models' efficacy in enhancing writing skills for IELTS candidates. Accordingly, the present study focused on two types of DA, namely interventionist and interactionist, to estimate their comparative effects on the EFL learners' writing complexity and fluency across young and adult learners.

2. Review of the Related Literature

Social interaction is fundamental to the development of cognition and human intelligence and has its origins in one's social and cultural milieu (Vygotsky, 1978). In his sociocultural theory, Vygotsky argues that for individuals' mental framework to grow, there are two levels at which their cultural development in social interactions can be observed: first, between the person and other people (inter-psychological) and second, within the individuals themselves (intra-psychological). Vygotsky argues that this is also the case for concept development, logical memory, and voluntary attention. All higher functions begin as actual connections between people (p. 57). Another aspect of Vygotsky's theory, Zone of Proximal Development (ZPD), is the idea that there is a limited area where cognitive growth may take place. This "zone" refers to the area of study where the student has shown cognitive competence but where further progress need guidance and collaboration from peers (Briner, 1999). The learner can be given "scaffolding" by a teacher or more competent peer to help them build sophisticated abilities or a growing understanding of different knowledge domains. Dynamic assessment (DA), as one of the offshoots of the scaffolding perspective, has proved effective in foreign language

classroom (Abdolrezapour & Ghanbari, 2021).

Sternberg and Grigorenko (2002) assert that there are three main methodological distinctions between DA and non-DA approaches to evaluation. One is that DA projects step towards the future by attempting to identify and develop emergent abilities, whereas non-DA concentrates on past, matured abilities. The role of the examiner is the subject of the second distinction. While non-DA requires examiners to play a neutral role and not interfere with the testing environment, DA is defined by the examiner's intervention and integration of teaching into the assessment process. The last characteristic that sets DA apart from non-DA is the provision of qualitative feedback during the examination. Any assessment format may be dynamic so long as mediation is included in the assessment procedure (Lantolf & Thorne, 2006).

Lantolf and Poehner (2004) introduced interventionist and interactionist approaches of DA and argued that the methods of providing mediation are where the approaches diverge. The interactionist model entirely combines evaluation and instruction so that neither one can exist without the other (Poehner, 2008). He further argued that this paradigm differed from previous instructional methods in prioritizing teaching students how to acquire new information. It aimed to increase the learners' capacity for learning critical skills and identifying effective problem-solving techniques. Lantolf and Poehner (2008) also asserted that interactionist DA follows Vygotsky's predilection for cooperative dialoging in which assistance emerged from the interaction between the mediator and the learner. Hence, interactionist DA is especially attuned to the learner's zone of proximal development (ZPD). Vygotsky (1978) defined ZPD as the gap between an individual's actual level of development as measured by their ability to solve problems on their own and their potential level of development as measured by their ability to work together with more advanced peers to solve problems. His hypothesis stated that while a learner is in their ZPD, they are able to absorb information more. Moreover, working inside the learner's ZPD allows us to examine both the brain functions that have already been completely formed as well as those that are still in the process of development.

According to Poehner (2008), the interventionist model differs from the interactionist model in that mediation proceeds from the most implicit to the most explicit options and concludes with an accurate response. The tests in this model are conducted using a

generally uniform procedure. If the student is unable to complete the assignment satisfactorily, so the teacher gives him or her the necessary prompts. Moreover, as Poehner presents, interventionist assessment focuses on a scripted and quantitative evaluation method, such as psychometric testing, while interactionist assessment relies on an interactive and qualitative approach to assessment.

One distinctive feature of interventionist DA is the use of standard operating procedures (SOPs) and other types of support to provide quantifiable outcomes that may be highlighted for group comparisons on other scales and for prediction of future test scores (Poehner, 2008). In this model's typical test-teach-retest architecture, the student's ZPD is quantitatively determined as the variations in their performances and test results before and after the teachers' involvement. As Guenette (2007) argued, evaluation incorporates measurable preprogrammed help and focuses on quantitative psychometric measurement in the interventionist paradigm. Standardized treatments are a great way to assist advance the assessment process' predictive validity. Such interventions are created to examine an individual or group's ability to utilize planned guidance, feedback, and support.

Research on the impact of DA and its varieties on the proficiency of EFL students in various L2 domains is extensive. However, the studies conducted on the application of DA in writing assessment seem to be scarce. For instance, Miao and Mian's (2013) study in the Chinese EFL context aimed to find the likely impact of DA on EFL learners' writing complexity, accuracy, and fluency (CAF) along with local and global coherence. Their study showed that the learners exposed to DA could outperform the others in the writing post-test regarding both sentence and discourse level scores.

In addition, in an effort to better understand how learners responded to DA interventions and how they wrote in Web 2.0 contexts, Zafarani and Maftoon (2018) examined participants' works before and after online and in-person collaborative mediation to evaluate their effects on second language authors. The learners' pre- and post-tests' total information, syntax and vocabulary difficulty, and text volume were examined. Blogging as a Web 2.0 mediation tool improved the participants' writing performance the most. Asynchronous collaborative computer-mediated group showed substantial gains in paragraph length, lexical complexity, and syntactic complexity

compared to face-to-face mediated group. They concluded that DA methods using Web 2.0 technology enhanced L2 learners' writing, thus language practitioners and instructors should consider using it in L2 writing courses. In the same vein, when it came to the grammatical correctness of the narrative writing produced by EFL learners, Tabatabaee et al. (2018) contrasted the results of interventionist DA, cumulative Group-DA, and static assessments. The researchers found that when it came to boosting the accuracy of the EFL students' narrative paragraph writing, cumulative Group-DA was the most effective approach.

Further, Khorami Fard and Derakhshi (2019) did a study using the Vygotskian SCT of mind and the concept of DA. They divided the participants into two groups: DA and non-DA. According to their errors, the DA group underwent intervention/mediation (interventionist DA) over five sessions, while the non-DA group received no mediation or feedback. They employed the sandwich model of dynamic assessment. In contrast to the control group, the experimental group participants who got mediation comprehensively resolved their writing issues in a more acceptable way. In other words, using DA as an alternate testing method had a positive impact on test results as well as writing fluency of the participants.

Likewise, Sardarianpour and Kolahi (2021) attempted to compare the impact of dynamic and negotiated evaluation on EFL learners' writing complexity and fluency. Their study participants were divided and placed into three groups: negotiated assessment, traditional instruction, and DA. They found out that while DA was considerably effective in enhancing writing complexity, negotiated assessment greatly outperformed both control and dynamic assessment groups in terms of increasing writing fluency. However, DA did not significantly outperform negotiated assessment in terms of increasing writing complexity.

With respect to age, as a decisive factor for learners, to get along with dynamic assessment, the assumption is that young and young adults are more vulnerable to dynamicity (Lidz, 1987; Poehner & Wang, 2021). However, some other studies have found that adults can apt themselves with dynamic assessment more than young EFL learners (Malmeer & Zoghi, 2014; Zohoor et al., 2021). Furthermore, Larsen and Nippold (2007) found that young learners are more in need of scaffolding than adults. In their

study, a positive correlation between the children's literacy levels and their performance on the DA task was observed, revealing a wide variety of ability levels in the young learners. Using morphological analysis to explain new words' meanings came easily to some young learners, but others needed more adult scaffolding. Vygotsky (1998) found that young learners' performance with the help of adults can equal that of young adults. However, the extent to which the term DA can influence learners of all ages remains debatable (Azizi & Namaziandost, 2023; Poehner & Wang, 2021).

Although the review of the related literature shows a substantial amount of research conducted to investigate the role of DA and its types on various language skills and sub-skills in various contexts, L2 writing quality features such as fluency and complexity, are almost missing. Due to the significance of complexity, accuracy, and fluency (CAF) in writing quality assessment considering the age of the learners, the urge of focusing on the impact of DA types on the development of such writing features is more felt. Therefore, there seems to be a genuine need to bridge the gap and add to the existing knowledge regarding the practicality and usefulness of carrying out DA procedures to help IELTS test takers' writing performance. Consequently, the present study intended to examine the effect of implementing interactionist and interventionist DA procedures on Iranian IELTS learners' writing skill in terms of complexity and fluency. In pursuit of this goal, the following research questions were addressed in this study:

1. Is there any significant difference between the effects of interactionist vs interventionist assessment types on young and adult Iranian IELTS candidates' writing fluency?
2. Is there any significant difference between the effects of interactionist vs interventionist assessment types on young and adult Iranian IELTS candidates' writing complexity?

3. Methodology

3.1. Design

The present study employed a quasi-experimental pretest-posttest design. In this section, detailed information about the participants, instruments used to collect and analyze the

data, and the procedure of the study will be presented.

3.2. Participants

The study adopted a non-random convenience sampling to select participants from the available groups. Accordingly, 140 candidates out of an initial group of 168 individuals who had enrolled in a language Institute to get prepared for the IELTS exam in the spring of 2021 agreed to participate in the study. The participants, both male (n=90) and female (n=50) and at the age range of 15 to 48, were divided into four groups namely, young interactionists (32), young interventionists (32), adult interactionists (38), and adult interventionists (38). Following Bermejo Boixareu's (2023) classification of learners into age groups, the age of 19 was considered as the cut-off age to divide the sample into two groups of adults (above 19) and young (up to 19) participants. The number of participants in the adult and young groups was 76 and 64, respectively. Each group was subsequently divided into two equal groups who were randomly assigned into two types of treatment, namely, interactionist and interventionist DA.

3.3. Instrumentation

The instruments used in the present study included a standard test of English language proficiency known as the Preliminary English Test (PET) and two writing tests, the pretest and the post-test. The instruments are explained in detail below:

Preliminary English Test (PET)

The researchers utilized the PET to assess the participants' general English proficiency, as its format aligns with that of the IELTS test, albeit with a lower difficulty level. The PET comprised reading, writing, listening, and speaking sections, with a maximum score of 100. Orozco and Shin (2019) examined the PET's inter-rater reliability, reporting reliability estimates for each section and confirming the test's construct validity through confirmatory factor analysis. In the current study, the PET demonstrated a KR-21 reliability index of .82, which is considered appropriate for assessing English proficiency. Fulcher and Davidson (2007) suggest that tests with reliability estimates below 0.7 are unreliable, while high-stakes tests typically aim for estimates exceeding 0.8 or 0.9.

Writing Pre- and Post-tests

Two IELTS writing tasks were administered as pre and post-tests in the study. Task 1

involved writing a short informal or semi-formal letter (150 words) in response to a situation, while Task 2 required composing an essay (250 words) addressing a point of view or problem. The pretest aimed to assess participants' writing ability and specific features such as syntactic complexity and fluency. Participants received a topic, and their writing was evaluated based on a rubric covering these components. After the treatment, participants completed a post-test writing task, which was analyzed for complexity and fluency. Inter-rater reliability was established for both tests, and the average ratings were used in the analysis. Fluency was assessed by the average number of words per T-unit (W/T), while complexity was measured using the average number of clauses per T-unit (C/T) suggested by Larsen-Freeman (2006). Overall writing performance was evaluated using the IELTS writing scale, with scores converted to the Test of Written English (TWE) scoring guide for ease of calculation.

Raters

The reliability of the writing assessments was ensured through an inter-rater method involving two independent raters. In cases where there was a significant discrepancy between scores (i.e., more than 1), a third rater was consulted. One of the researchers was experienced in IELTS writing task scoring and the other two were university lecturers trained as IELTS mock examiners. They were briefed on the CAF descriptor for evaluating complexity, accuracy, and fluency, while the IELTS rubric was used for overall scoring. Inter-rater reliability was assessed for both pretest and post-test writings. Significant agreement was found between the raters for both the pretest (r = .863, p < .05) and post-test (r = .882, p < .05), indicating a large effect size. Similarly, significant agreement was observed for pretest and post-test fluency, complexity, and accuracy, with all correlations representing a large effect size (ranging from .795 to .905, all p < .05). However, in the present paper, fluency and complexity were taken into account and accuracy was reported in another article (see Kashef et al., 2024).

3.4. Data Collection Procedure

The data collection procedures in the present study were done in three phases: pretest, intervention, and post-test.

3.4.1. Pretest Phase

The initial number of participants was 168, from whom 140 candidates agreed to

participate in the study. At first, the participants (n=140) were divided into two groups considering their age as young (64) versus adult (76). Then, each young and adult group was randomly split into two equal subgroups, interventionist versus interactionist DA, during their instructional course. Therefore, there were four groups, young interactionists (32), young interventionists (32), adult interactionists (38), and adult interventionists (38). Then, the PET was administered to all groups to check the participants' language proficiency level. The study population was considered as B1; intermediate level based on the Common European Framework of Reference (CEFR) (https://www.cambridgeenglish.org). Subsequently, the participants in the four study groups received the pretest of L2 writing, and the collected scripts were scored in terms of writing complexity and fluency.

3.3.2. Intervention Phase

During the intervention phase, both the interventionist and interactionist groups received identical instruction, course materials, and hours of teaching over eight weeks. The only difference laid in the feedback and assessment methods employed. In the interactionist groups, students engaged in dynamic assessment through various activities. They were divided into subgroups for collaboration and assigned writing tasks from the course book. The teacher corrected their writing samples through individual interaction, providing assistance and feedback. Additionally, meta-pragmatic instruction was used, wherein learners and the teacher discussed writing topics together to clarify language usage. Classroom discussions were facilitated, and the teacher continuously provided scaffolding within the learners' ZPD. Hence, in line with Lantolf and Poehner (2010), the intervention followed several steps as follows:

Step 1: The researcher divided students into subgroups of 4-5 learners to encourage cooperation and coordination among them.

Step 2: The researcher instructed the participants to write about the assigned topic, which was selected from the course book, before discussing and sharing their understanding in their respective subgroups.

Step 3: In the third step, the teacher asked the students to specify what they exactly wanted to say, talked about their blueprint, and presented what they had in mind in case they had already read about the topic. Then, she provided them with some guidelines in

writing, such as brainstorming, categorizing the information, and developing a blueprint prior to starting writing.

In addition, the students were asked to search the internet, find a text about the topic in their sub-groups, read the text, and discuss their understanding with their team members. The teacher provided guidelines for reading, taking notes, and discussing the content with their peers. While the students were reading the text and taking notes, the teacher supervised them and provided them with guidelines concerning how to look at the meaning of new idiomatic expressions in their dictionaries, learn from the sentences written in the text, and use them in their own writing. While the students were discussing the content of the text to be written, the teacher made notes of the major problems, especially with regard to the use of structures and dictions. She intervened in some cases to help resolve problems by providing clues and asking relevant questions, leading them to the accurate procedures to take. In general, the teacher monitored the discussions among the learners in each group and provided them with corrective feedback when needed. This way, learners' L2 writing ability was constantly assessed by the teacher, who spent some time with each group, taking part in their discussions and writing performance.

Step 4: The learners of this experimental group were then instructed to complete the corresponding writing tasks in the book independently. For example, the writing section focused on some idioms about food and favorite cuisines. The learners were supposed to read the dialogue and write about it in their own words. They were to use idioms such as "I've cut back," "it is not my cup of tea," and "time and again," as addressed in the text.

Step 5: The researcher then took part in each subgroup for a predetermined amount of time. The teacher used the cumulative interactionist DA method, which relied on cooperation among learners when they built their ideas to expand their assigned writing based on the previous views given by their classmates or helped each other to build the proper piece of writing for the given topic. The interactionist DA model has the instructor working with students one-on-one through a sequence of DA exchanges until the class has mastered the material (Poehner, 2009). To put it more simply, in accordance with Poehner (2009) and Miri et al. (2017), students took turns playing the role of the teacher's main conversationalist, with the idea that the next one-on-one sessions would be more

fruitful if they built upon previous ones that the class had observed. Accordingly, the teacher called on a student to respond to the opening query, i.e., *presenting healthy food features* while making sure that the other students were paying attention. If the learner's response written in the form of a paragraph was accurate, the teacher provided her with encouraging feedback, and if it was not effective, she would ask the other group members to help her correct her writing. All the students in a group took part in the activity. The teacher played a monitoring role and mediated when needed, providing the learners with corrective feedback.

Step 6: The researcher provided the learners with techniques consistent with interactionist approaches to DA, such as *hints, leading questions, explicit feedback*, and *recommendations* (Lantolf & Poehner, 2014). The teacher and students were in constant communication until the students could arrive at an orderly piece of writing about the given topic.

Step 7: Assessment: in the interactionist group DA, through collaboration between the student and the assessor, the participants were evaluated and provided with the necessary support. The improvement in this approach was greatly sensitive to the developed group's ZPD of the learners. In the interactionist group, the continual interaction among the students and the teacher could provide a teaching atmosphere in which a group's ZPD is potentially created, which can result in a more profound and conceptually based understanding of the given activities in the L2 classroom (Miri et al., 2017). Hence, the learners were asked to develop their final draft of writing for the assigned topic, review it in their group, receive the consent of all the group members, and then submit it to the teacher.

In line with Lantolf and Poehner (2013), the DA techniques were used to treat the interventional DA groups. The instructor provided calculated interventions and direct teaching to assess and foster learners' performances for the pragmatic tasks.

Accordingly, learners in the second experimental group underwent the following steps.

Step 1: The researcher divided the learners into small subgroups.

Step 2: The interventionist group participants were given writing instructions and received some sample model writings from previous high scorers of IELTS writing to use as an acceptable model to compare with their own writing.

Step 3: The learners were also given test samples from standard writing tests, and the teacher scored their writing samples. The results were quantitatively reported back to the participants. The teachers' qualitative feedback to individual learners was missing in the interventionist condition.

In order to help learners enhance their writing abilities and complete the given assignment, the researcher relied on the provision of support and mediation. If students were successful with target activities, the instructor created more difficult work, such as asking them to discuss and then write about an incident that happened to a classmate. This way, she avoided using mediatory intervention.

Step 4: These intermediary interventions were provided by the teacher in accordance with the claims and principles of DA. They helped the students improve their second language knowledge, particularly their writing skills and knowledge within their ZPD, and they worked together with More Knowledgeable Other (MKO). In order to get the student to reevaluate her/his writing, one tactic is *to pause*, which is entirely non-verbal and tacit.

Step 5: The teacher resorted to direct, clear explanation as a final resort after attempting various types of mediation that were unsuccessful. The mediator/researcher in this group provided the same hints for all learners and gave feedback directly and explicitly based on the needs of the learners in the group.

Step 6: Assessment: the impact of interventionist DA was examined. To help learners get aware of their approach, the researcher also evaluated their IELTS writing CAF through writing exams that were given after every other session. In their writing assignments, the students received instructor interventions, just like the other DA group, to evaluate and enhance their use of appropriate structures and styles. The learners received DA-based intervention following the Lantolf and Poehner (2014) scale. If the student's response was accurate, mediation wouldn't be necessary. However, if the student's writing was disorganized, the instructor would choose one of the 8 forms provided by the aforementioned Lantolf and Poehner (2014) scale.

In the interactionist dynamic assessment classroom, the teacher and student engaged in a more collaborative and interactive discussion. The teacher provided feedback on the student's essay, identified areas for improvement, and guided the student in brainstorming ideas and developing their arguments. The focus was on the student's

active participation, and the teacher's role was to facilitate learning and growth.

In the interventionist dynamic assessment classroom, the teacher took a more directive approach. The teacher pointed out specific issues in the student's essay and provided direct instruction on how to address them. The focus was on the teacher's intervention and guidance, with the intention of correcting errors and improving the student's performance. The student's role was more passive, as they followed the teacher's instructions and made the necessary changes based on the teacher's feedback.

3.4.3 Post-test Phase

All four groups of students took the IELTS writing post-test when the 8-week (16-session) intervention ended. Learners ' performances were evaluated in terms of fluency and complexity. A consistency coefficient of.88 was obtained by the Pearson Correlation statistics, which determined the inter-rater reliability of the scores. To further ensure intra-rater consistency, the researcher double-checked and scored a few written samples; the resulting coefficient was as high as .89.

4. Results

Each participant took the PET. The normality of the scores' distributions, as a prerequisite to running parametric tests of inferential statistics, was checked and confirmed by running One Sample Kolmogrov-Smirnov (KS) test (p> .05). The descriptive statistics for the PET results are presented in Table 1.

Table 1

Descriptive Statistics: PET Scores Obtained from Four Groups

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
1	32	67.09	7.050	1.246	64.55	69.64	50	78
2	32	70.19	5.772	1.020	68.11	72.27	58	80
3	38	68.89	6.657	1.080	66.71	71.08	51	80
4	38	70.47	6.745	1.094	68.26	72.69	55	81
Total	140	69.21	6.644	.561	68.10	70.32	50	81

As seen in Table 1, the mean scores observed in the four groups were very similar. However, the parametric test of One-way ANOVA was run to examine the significance of

the probable differences among the groups. Table 2 shows the results of the analysis for PET scores of participants in four groups.

Table 2

Results of One-Way ANOVA by Groups' PET Scores

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	238.346	3	79.449	1.832	.144
Within Groups	5896.646	136	43.358		
Total	6134.993	139			

As seen in Table 2, the p-value observed in the ANOVA test was .144 and above the alpha level of significance (p> .05), so the equality of the means hypothesis was not statistically rejected. This means that the differences among the means observed in the four groups were not statistically significant. The four groups were almost equal in terms of general English proficiency.

Research Question One

The study intended to find if there was any significant difference between the effects of interactionist vs interventionist assessment types on young and adult Iranian IELTS candidates' writing fluency (WF). Table 3 shows the descriptive statistics for young and adult interactionist and interventionist groups on posttest of WF after controlling for the effect of pretest. Both young interactionist (M = .935, SE = .047) and interventionist (M = .874, SE = .038) groups had higher means than that the adult interactionist (M = .916, SE = .039) and interventionist (M = .856, SE = .053) groups on the posttest of WF after controlling for the effect of pretest.

Table 3

Descriptive Statistics; Post-test Scores of WF by Groups by Age with Pretest

Age	Group	Mean	SE	95 % Confidence Intervals	
				Lower Bound	Upper Bound
Young	Interactionist	.9359	.04717	.531	1.262
	Interventionist	.8744	.03852	.471	1.369
	Total	.9052	.05279	.522	1.401
Adult	Interactionist	.9168	.03987	.697	1.309
	Interventionist	.8561	.05340	.632	1.338
	Total	.8864	.05592	.624	1.221

Total	Interactionist	.9256	.04409	.721	1.291
	Interventionist	.8644	.04775	.639	1.303
	Total	.8950	.05512	.649	1.237

a. Covariates appearing in the model are evaluated at the following values: VAR00001 = 1.21.

Table 4 shows the main results of Two-Way ANCOVA. The results indicated that age did not have any significant effect on the performance of the EFL learners on WF (F (1, 135) = 1.96, p > .05, partial eta squared =.011); however, type of treatment (interactionist vs. interventionist) had a significant effect on WF (F (1, 135) = 104.37, p > .05, partial eta squared = =.437). The results also indicated that there was not any significant interaction between age and type of treatment (F (1, 135) = .084, p > .05, partial eta squared =.001).

Table 4

Tests of Between-Subjects Effects; WF Scores at the Post-test with pretest

Dependent Variable: Post-WF

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Pre-WF	.109	1	.109	86.975	.000	.390
Age	.002	1	.002	1.960	.164	.011
Group	.131	1	.131	104.377	.000	.435
Age * Group	.000	1	.000	.084	.772	.001
Error	.170	135	.001			
Total	112.566	140				

a. R Squared = .521 (Adjusted R Squared = .507)

Research Question Two

The second research question was an attempt to check if there was any significant difference between the effects of interactionist vs interventionist assessment types on young and adult Iranian IELTS candidates' writing complexity. Table 5 shows the descriptive statistics for young and adult interactionist and interventionist groups on posttest of WC after controlling for the effect of pretest. The results indicated that both young (M = 1.84, SE = .387) and adult (M = 1.84, SE = .393) interactionist groups had higher means than the young (M = 152, SE = .216) and adult (M = 1.53, SE = .271) interventionist groups in the posttest of WC.

Table 5

Descriptive Statistics; Post-test Scores of WC by Groups by Age with Pretest

Age	Group	Mean	SE	95 % Confidence Intervals	
				Lower Bound	Upper Bound
Young	Interactionist	1.8434	.38781	.932	2.286
	Interventionist	1.5247	.21671	.884	1.965
	Total	1.6841	.35059	.797	2.164
Adult	Interactionist	1.8463	.39312	.824	2.354
	Interventionist	1.5316	.27133	.791	2.564
	Total	1.6889	.37102	1.044	2.721
Total	Interactionist	1.8450	.38787	1.11	2.436
	Interventionist	1.5284	.24614	.923	2.198
	Total	1.6867	.36054	.818	2.323

a. Covariates appearing in the model are evaluated at the following values: VAR00001 = 1.28.

Table 6 shows the main results of Two-Way ANCOVA. The results indicated that age did not have any significant effect on the performance of the EFL learners on WC (F (1, 135) = 3.186, p > .05, partial eta squared = =.009); however, type of treatment (interactionist vs. interventionist) had a significant effect on WC (F (1, 135) = 46.155, p > .05, partial eta squared =.120). The results also indicated that there was not any significant interaction between age and type of treatment (F (1, 135) = .001, p > .05, partial eta squared =.002).

Table 6

Tests of Between Subjects Effects; WC Scores at the Post-test

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Pre-WC	3.598	1	3.598	44.317	.000	.116
Age	.259	1	.259	3.186	.077	.009
Group	3.748	1	3.748	46.155	.000	.120
Age* Group	.081	1	.081	.001	.987	.002
Error	10.962	135	.081			
Total	416.369	140				

5. Discussion and Conclusion

The results of the study indicated that the type of assessment (interactionist versus

interventionist) had a statistically significant effect on IELTS candidates' writing fluency (WF) and writing complexity (WC). Specifically, the interactionist group had higher mean scores in both WF and WC compared to the interventionist group. Age did not have a statistically significant effect on either WF or WC. Additionally, there was no significant interaction between age and assessment type in developing writing fluency or complexity. Overall, the findings suggest that the type of assessment used can have a significant impact on English language proficiency outcomes for IELTS candidates.

Learners' chances to communicate with instructors and peers may explain why interactionist DA was so successful in improving the participants' writing performance. Experts in both DA and sociocultural theory agree that student-teacher contact is the cornerstone of DA (e.g., Kozulin & Grab, 2002; Poehner, 2008; Poehner & Lantolf, 2013). The students benefitted from the teacher's methodical mediation and assistance, which led to gradual improvements in their writing. The students' writing CAF improved after receiving an interactionist evaluation in the interactionist treatment condition, even though the class size was too big (over 30 students) and the class time was too short to provide lengthy mediation to all of the learners.

These findings supported Aljaafreh and Lantolf's (1994) study, examining the connection between DA and L2 writing. They found how corrective DA feedback and the developing negotiation process between the teacher and students lead to L2 development. During the tutorials, the participants engaged in a DA conversation with a teacher who offered "graduated, contingent, and dialogic" corrective feedback (p. 468) to assist students in editing their writing. The conclusion was that effective error correction requires mediation from other people who dialogically co-construct a ZPD where feedback as regulation becomes relevant and can be appropriated by the learners. Moreover, the present study findings highlight the findings reported by some other studies such as Aljaafreh and Lantolf (1994), Birjandi et al. (2013), and Poehner and Lantolf (2005).

Besides, the interactionist DA aids the educator in identifying student writing issues and improving the quality of feedback given to students. Consistent with previous research in China. The current study employed interactionist DA to examine global and local coherence, correctness, fluency, and complexity (Miao & Mian, 2013). In addition to

showing that the experimental group outperformed the control group, their results also showed that learners in the mediation groups were able to avoid relying on chance when making self-corrections, which led to even greater improvements than in the courses that had previously been taught in a more conventional manner. Similarly, Shi et al. (2019), Negretti and Mezek (2019), and other authors have recognized the importance of dialogic collaboration in fostering students' writing abilities. The results of Shi et al.'s (2019) study offered strong evidence in favor of a dialogic approach in encouraging students' argumentative writing, particularly for academically underachieving students. Negretti and Mezek (2019) also showed that interaction with supervisors enhanced the development of writing regulation. Through analysis of the authors' interviews and essays, they demonstrated that "social interaction is vital in supporting students' management of writing, effectively leading to a sense of individual development and transformation" (p. 28).

The findings of the present study are also in line with other similar studies in the Iranian EFL context, such as Nasiri and Khorshidi (2015), Heidari (2019), and Afshari et al. (2020), among others who all found that interactionist DA had a noticeable impact on the learners' writing abilities. Kheradmand Saadi and Razmjoo (2017) also found greater beneficial effects for interactionist DA on illuminating the academic writing of two English language and literature students. The implementation of various types of mediation was shown to be effective in encouraging students' writing in their qualitative study, which examined the interactions between the teacher (mediator) and students in the written tasks. Rahimi et al. (2015) provided more evidence that an interactionist DA aided the development of three advanced EFL students' conceptual L2 writing abilities in a qualitative case study. Analysis of the DA tutorial sessions' interactions led them to the conclusion that interactionist DA may provide significant diagnostic and developmental benefits in the field of writing.

The findings of the present study concerning IELTS candidates were also very similar to the findings of a study in Iran conducted by Daneshvar et al. (2021), who used a mixed-methods approach to study the likely impact of the two mentioned DA on IELTS candidates' performance in academic writing task 2. According to the quantitative findings, the interventionist group performed much better in writing than the static group.

Nevertheless, there was no statistically significant difference in the writing proficiencies across the DA groups. The quantitative results show that the DA model outperformed the SA model in developing IELTS writing task 2 abilities, which were supported by the qualitative findings.

On the other hand, some earlier research findings were refuted by the varied effects of interactionist and interventionist assessment forms reported in the current study. For instance, Rahmani et al. (2021) showed no significant differences between the two modalities of DA but observed substantial changes in the writing CAF between the DA and non-DA groups. The academic writing task 2 performance of IELTS candidates in a mixed-methods study was studied by Daneshvar et al. (2021) and revealed that the writing performance of the interventionist group was much better than that of the interactionist group. The study examined the potential impact of interactionist and interventionist DA models on IELTS candidates' performance. In terms of writing ability, however, neither the interactionist nor the interventionist DA groups differed much. The findings of Malmir's (2020) study also contradicted the findings of the present study. Malmir (2020) examined the impact of interactionist and interventionist DA models on the fluency and speed of pragmatic listening comprehension in the Iranian EFL setting. He observed that the DA groups did much better than the control group. In addition, the interventionist DA group outperformed the interactionist DA group significantly in terms of pragmatic correctness but not pragmatic understanding speed.

The results of the current investigation allow us to infer that receiving writing tasks related to group dynamic assessment, whether interactionist or interventionist, significantly affects EFL learners' writing complexity and fluency, but the power of interactionist DA is more than the interventionist one in this respect. This is in line with Lantolf and Poehner's (2023) presentation of sociocultural theory in the L2 classroom in the East Asian context, where both interaction-based and intervention-based instructional tasks proved effective. Moreover, literature review on second language writing instruction related to CAF (Afshari et al., 2020; Alavi & Taghizadeh, 2014; Barkaoui, 2007; Bulté & Housen, 2014; Etemadi & Abbasian, 2023; Kang & Lee, 2019; Rashidi & Bahadori Nejad, 2018), indicates that using DA strategies might enhance L2 development and, more specifically, the writing abilities of L2 learners.

The present study's findings have several implications for improving our understanding of how to teach and learn. The findings may help train EFL educators on DA, a method that combines classroom teaching with formative evaluation. What this means is that teachers are able to help their pupils while also evaluating them. By seeing how students react to the mediation, instructors may get a better picture of their students' potential success in the language. In fact, educators gradually discover how DA boosts EFL students' proficiency. They are able to better assist language learners in reaching their full potential with the use of this sort of evaluation, which focuses their attention on the students' potential. Similarly, students gain insight into their own growth potential and are able to enhance their language abilities. In addition, Minakova's (2019) research found that when instructors use mediation during evaluation, they are able to discover students' hidden talents rather of only recording their present performance. Put simply, DA investigates the extent to which performance may be altered and the kind of intervention that is required to foster growth within the zone of proximal development (ZPD) of the learners.

The results of the study regarding the positive effects of interaction and DA on IELTS writing instruction raise some practical implications for IELTS stakeholders, mainly instructors, and IELTS candidates as EFL learners and even materials developers, and can help them achieve their goals more efficiently. The current research findings offer insight into the effectiveness of the incorporation of interactionist DA as a model in the preparatory courses of the IELTS general writing task. IELTS teachers should exploit the principles of the interactionist DA in writing preparatory courses of the IELTS to identify students' writing problems and remove them via dynamic face-to-face communication, especially based on the interactionist model, with IELTS candidates, which could play a constructive role in the betterment of their performance in writing. In simpler terms, this study puts forward some implicit pedagogical suggestions for IELTS instructors to explore novel ways of teaching IELTS writing and refine their current writing instruction procedures. This could be accomplished by assigning dynamic-based tasks to IELTS candidates and offering mediational guides and feedback based on the interactionist DA model in the IELTS preparatory writing courses. Further, the findings of this study may encourage and propel IELTS trainers to utilize DA forms, i.e., the interventionist and

interactionist models, in their teaching process of IELTS writing to foster prospective IELTS candidates' writing proficiency and expedite their developmental process.

In contrast to a study by Malmeer and Zoghi (2014) that focused on the effects of DA of grammar on different age groups and found that adult EFL learners benefited more from the DA than teenage learners, the current study found no main effects for the learners' age (young versus adult) and an interaction between age and the type of DA on the learners' writing CAF. The question of how ageing affects SLA has long sparked heated debate. Although many research findings do not support the existence of a critical period for L2 learning, many scholars support the effect of age on SLA (Sang, 2017). Based on some evidence, it may be assumed that older students are superior to younger students, while younger learners usually perform better than older learners after years of L2 learning. Because the impact of age on SLA in EFL and ESL settings may be different, it is important to pay more attention to contextual elements while studying EFL. Generally speaking, whether or not there is a critical period and a specific age period for achieving L2 is still debatable. With regard to the effect of age, the present study findings were somewhat similar to the findings of a research study done by Torras and Celaya (2001), who could not find significant differences between young and adult learners' development of English writing skills.

Despite the benefits and drawbacks of DA, teaching both instructors and students in the theoretical and practical parts of DA can transform the educational experience into one that is stress-free, welcoming, and joyful. As a result, students can gain insight from one another and contribute their own expertise. For this reason, plans are in the works to equip educational institutions with relevant knowledge and resources so that dynamic assessment can be used in tandem with, but not in place of, non-dynamic assessment in an effort to improve teaching and testing. There is no doubt that DA will eventually find its way into classrooms.

Teachers of second languages may use both interactionist and interventionist DA to increase their students' awareness of the issues they face. The DA-oriented language classroom assumes that DA assignments can facilitate learning (Shafipoor & Latif, 2020), and students enjoy a cooperative mode and pay attention to their peers' growth. Competition will be reduced while collaboration and cooperation are encouraged. By

integrating classroom conversations, students can achieve a passable level of writing in a second language (Ramazanpour et al., 2016).

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