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Research Paper

Exploring the Impact of Interactionist and Interventionist Dynamic Assessment and Personality Traits on Descriptive Writing

Zaman Kargozari [1], Mohammad Rostampour [2] and , Leila Akbarpour [2]*

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Abstract

This study delves into the intricate landscape of second language (SL) writing assessment, with a focus on the impact of Dynamic Assessment (DA) and learners' personality traits on their writing achievement. DA is an approach that combines instruction and assessment to mediate with the areas that students need help with to promote learners understanding and writing skills. To conduct this study, 90 participants were first given an online Oxford placement test and then, they were asked to write a descriptive essay as a pre-test, according to which, the students were randomly assigned to interventionist, interactionist, and control groups. Subsequently, the two experimental groups attended five weekly sessions in which the instructor introduced the five components of descriptive writing. The students were then given a writing task as the post-test and were asked to fill out a Five Factor Personality Inventory. A t-test was used to compare post-test writing scores of the two groups to discover which treatment had a greater impact on intermediate learners' writing achievement. The analysis of the data obtained reveals that students' personality traits significantly affect their performance in descriptive writing. Also, both interactionist and interventionist techniques exhibit a positive influence on learners' writing achievement though the interactionist group received a higher mean score in descriptive writing. These findings resonate with the broader academic discourse where dynamic assessment is recognized as a central goal of language learning, and autonomy is considered an indispensable prerequisite for successful language acquisition.

Key Words: Dynamic Assessment, Interactionist DA, Interventionist DA, Descriptive Writing, Personality Traits.

١- Department of English Language Faculty of Humanities, Shiraz Branch, Islamic Azad University

٢- Department of English Language Faculty of Humanities, Shiraz Branch, Islamic Azad University. Corresponding Author: mo.rostampour@iau.ac.ir

Introduction

Dynamic Assessment is a concept rooted in the Zone of Proximal Development, introduced by Vygotsky (1978) within the framework of social constructivist learning theory. It encompasses two sub-branches: interactionist and interventionist approaches. Descriptive writing holds a crucial role in foreign language instruction, and Dynamic Assessment can serve as an effective method to evaluate students' descriptive writing skills. By analyzing participants' writing samples with providing constructive feedback, educators can assist students in enhancing their descriptive writing ability. The participants are asked to fill out a five-factor Personality Inventory to test the effect of personality traits on learners' performance in writing achievement.

According to the socio-cultural theory of Vygotsky (1978), learning is considered a social process, and its prominent feature is the role of interaction in growth and cognition. This theory emphasizes the intermediary relationship between the world and man, which is necessarily based on dynamic evaluation. Interactions in society develop and this action leads to fundamental changes in the learning stage of every human being. Vygotsky believes that cultural development in every person has two stages: in the first stage, the person reaches a sufficient level of growth in society, and then the person enters the stage of personal growth.

In this regard, in the early 1930s, Vygotsky (1930) proposed the concept of the developmental zone to focus on understanding and formation of the mental development of each person. He believed that the area adjacent to growth is defined as the relationship between the actual level of that person's current knowledge and the ability and power that an external factor gives to a person to reach higher levels. Providing appropriate feedback along with proper and timely mediation by the teacher can bring surprising results in the creation of teaching and testing. When we talk about the area adjacent to growth, we are examining the interaction between a talented person and a new person. As you can see, a novice person gradually grows and becomes independent with the help of another person and can do a task alone.

Descriptive writing ability refers to an individual's ability to write a descriptive text. It involves the ability to describe objects, people, and events using sensory details and imagery. Descriptive writing ability is important for a variety of reasons, including academic success and effective communication. Dynamic assessments of descriptive writing ability are used to understand an individual's strengths, and weaknesses in this area, and to identify areas for improvement.

One of the benefits of using dynamic assessment to assess descriptive writing ability is that it allows teachers to identify areas where students may need additional support. For example, if a student is struggling with vocabulary, the teacher can provide targeted instruction and feedback to help them develop their vocabulary skills further. By identifying and addressing areas where students need additional support, teachers can help students reach the upper limit of their ZPD and achieve their full potential.

Since assessment endeavors to bridge the gap between learning and teaching in academic settings, a recurring tendency in EFL/ESL writing instruction has attracted researchers' attention toward the concepts related to writing assessment (Connor & Mbaye, 2002). This shift of attention and focus on writing assessment has grown rapidly over the past few years which has resulted in raising teachers' and educators' awareness of significant testing difficulties such as reliability and validity, test types and

purposes, and particular methods of writing assessment. The testimony of this amplified consideration is several publications in recent decades that have considered or reconsidered the problems related to foreign language writing assessment (Cumming, 2001; Connor & Mbaye, 2002; McConnell, 2002; Marlin, 2003; Hargreaves, 2007; Bizhani, 2009; Siyyari, 2011). Although assessment in second/foreign language writing presents great findings, this evaluation has not gone far beyond traditional methods concerning some other aspects such as the presence of the students in the assessment procedure or considering the personality of the students on their performance in writing specific genres.

In general, DA is a path to evaluate students' achievements by inserting an intermediary in the evaluation process and trying to encompass evaluation and learning. The different DA models have been used in SLA and have confirmed their important aids. However, there is a lack of studies on their application to learn descriptive writing skills according to the personality traits of domination in general and in particular. Therefore, this study is designed to use intervention, and interaction methods in practice and examine the impact of each method on the performance and improvement of students. Another motivation for this study is to examine the ways that any DA method can affect the anxiety, and motivation of students in an Iranian environment.

1.1 Statement of the Problem

Writing is often considered as the most challenging skill, both for the instructor who want to teach this skill efficiently, and for the learners who aim to master all aspects of the language they are trying to acquire. New developments in psychology and linguistics have revealed that the problem is often rooted in lack of recognition of some effective elements influencing students learning styles, strategy choice, decision making and their overall attitude towards the subject they are studying. Sykes (2015) observed that "the personality of a learner is a major factor in determining the level of success in second language learning" (p. 715). Therefore, it seems indispensable that understanding and recognizing personality traits must be taken for granted if we seek optimal efficiency in teaching and learning a new language.

Writing assessment is therefore a challenging area within testing and evaluation methods. As researchers in both L1 and L2 have noted, this challenge arises from the various contexts in which writing is utilized by a wide range of individuals in numerous settings. This concept cannot be easily defined in a manner that captures all aspects of this skill (Camp, 2012). Generally, educators strive to incorporate their teaching experiences into the evaluation process and engage as active readers who seek to understand and analyze their students' writing. Assessing writing poses some unclear challenges, as written language is not merely spoken language transcribed onto paper; rather, it is a form of communication that encompasses many sociocultural factors and cognitive processes, among other considerations (Weigle, 2002). Consequently, the issue may be addressed through a careful examination of students' writing, as they articulate their ideas on paper to be assessed later, to determine whether they can be evaluated solely on their writing abilities or if other factors may also play a role (Graham & Rijlaarsdam, 2016).

Overall, this study is expected to provide useful insights for both students and teachers by delineating the right course of action. It can encourage learners to get a better insight into their personality type and improve their weaknesses and thereby enhance their potentials for success in their academic performances. Language instructors can take advantage of the findings of this study in teaching and evaluating their students' writing ability by providing targeted

instruction aimed at individuals' shortcomings.

1.2 Significance of the Study

Since assessment aims to connect learning and teaching in educational environments, a notable trend in EFL/ESL writing instruction has drawn researchers' attention to the concepts associated with writing assessment (Connor & Mbaye, 2002). This shift in focus on writing assessment has rapidly gained momentum in recent years, leading to an increased awareness among teachers and educators regarding significant challenges in testing, such as reliability and validity, types and purposes of tests, and specific methods of writing evaluation. Evidence of this heightened interest is reflected in numerous publications over the past few decades that have examined or reexamined issues related to foreign language writing assessment (Cumming, 2001; Connor & Mbaye, 2002; McConnell, 2002; Marlin, 2003; Hargreaves, 2007; Bizhani, 2009; Siyyari, 2011). Although assessment in second/foreign language writing reveals noteworthy insights, this evaluation has not significantly progressed beyond traditional methods concerning certain aspects, such as student involvement in the assessment process or the consideration of students' personalities in their performance across specific writing genres.

In general, dynamic assessment (DA) serves as a means to evaluate students' achievements by integrating an intermediary into the evaluation process, thereby merging assessment with learning. Various DA models have been employed in second language acquisition (SLA) and have demonstrated their vital contributions. However, there is a scarcity of research concerning their application to developing descriptive writing skills. Consequently, this study, which emphasizes oral functions, is designed to utilize interventionist and DA interaction methods in practice and assess the impact of each approach on students' performance and improvement.

Another important aspect of this study is that there has been limited relevant research exploring the significance of different personality traits in descriptive writing. It is widely acknowledged that a well-rounded learner of English (or any other foreign language) should have mastered all linguistic skills. However, given that writing is often perceived as the most challenging skill to acquire, this study aims to illuminate the psychological or cognitive characteristics that must be seriously considered alongside linguistic features such as grammar and vocabulary.

1.3 Objective of the Study

This study attempts to explore the impact of DA on English descriptive essay writing. After a meticulous study of DA and its underlying concept of the zone of proximal development (ZPD) along with its application to foreign language educational contexts, the two approaches of DA, namely, interventionist or interactionist, will be applied to assess the development of descriptive writing ability. It aims to determine the extent to which each of these methods might help students.

In addition, the relationship between students' personality traits and their performance in descriptive writing as well as their attention to specific components of descriptive writing (Namely content, organization, grammar, vocabulary and mechanics) was investigated.

The results of the present research will expand the development of educators, the teaching community, and researchers to concerning the significant role of assessment and how some other factors might be involved indirectly. In the same vein, teachers and students will learn a lot about the learning process, the role of intervention and interaction along with a thorough insight of their personality traits. A lot can also be

learned through a review of the related literature which might strengthen or weakens the emerging results. According to the problems mentioned, the current research aims to apply whether the combination of such DA intermediaries or interventions can have a positive impact on EFL students and be used in institutions.

The present study seeks to answer the following research questions:

Q1 Do dynamic and non-dynamic assessment have impact on the development of Iranian EFL learners' descriptive writing ability?

Q2. Which of the two types of DA, interventionist or interactionist, better assists the development of descriptive writing ability?

Q3. Is there any relationship between students' performance in descriptive writing in terms of their personality traits?

Q4. Is there any relationship between students' attention to specific components of descriptive writing (namely, content, organization, grammar, vocabulary, and mechanics) performance in terms of personality traits?

2. Literature Review

DA is a method used to identify individual differences and their implications for instructional objectives by combining intervention with assessment measures. Some fundamental assumptions constructing this approach involve: 1) mental procedures are adjustable, 2) assessment is a communicative approach moving along with a learning stage, and 3) the principal objective of the assessment is to help students understand their potential and hidden abilities (Lidz & Gindis, 2003). In effect, DA conceptions sharply contradict with non-DA trainings that which focus on students' individual actions and activities. Vygotsky (1978) believed that solitary performance in assessment circumstances merely demonstrates abilities that already have been improved, leaving behind those unknown elements in the development process. Accordingly, DA pays attention to both what students can attain individually and what they can attain through proper mediation.

Until today, a limited number of studies have investigated the performance of second language students from the perspective of dynamic evaluation. However, the increasing interest of applied linguists in Vygotsky's (1978) opinion has led to the authoring of some works and researches about the functioning of dynamic assessment in the second language skills (Poehner & Lantolf, 2005; Hill & Sabet, 2009; Sadeghi & Khanahmadi, 2011; Derakhshan & Shakki, 2016; Farrokh & Rahmani, 2017; Ebadi & Rahimi, 2019; and Bahramlou & Esmaeili, 2019).

Alemi (2015) attempted at finding the effects of students' self-assessment of the writing skill in a course on their writing accuracy. The researcher has found out that although students tended to overrate the writing ability initially, the DA based course contributed to more accurate assessment. Dynamic Assessment also proved helpful in learning speech acts of apology and request in a study conducted by Derakhshan et al (2020). In a similar research, Khoramifard and Derakhshi (2019) investigated the impact of interventionist dynamic assessment on the improvement of EFL learners writing accuracy. Their findings revealed that the group which received mediations significantly outperformed the control group, which proves that dynamic assessment as an alternative to traditional testing procedures can have a more positive effect on the linguistic accuracy of learners.

Moreover, understanding and describing personality facets are of paramount significance in the process of learning a foreign language since the concept of language is largely associated with our feelings and emotions. These feelings have a

direct influence on our character and personalities (Siyyari, 2011). Therefore, it might tackle the way students write, the way raters' rate, etc. affected by personal beliefs, ideas, and preferences.

There have been several well-known personality tests that have been extensively used by psycholinguists or psychologists to study the connection between personality and other psychological concepts. (The Myers-Briggs Type Indicator, Minnesota Multiphasic Personality Inventory (MMPI), 16 Personality Factor questionnaire, Eysenck's three-factor personality theory, and finally Costa and McCrae's five-factor theory (2000)) are among the most famous personality traits tests. However, the most distinguished record among personality traits so far is Costa and McCrae's five-factor theory (2000) owing to its cross-cultural support and stability over time (Feist & Feist, 2006).

Komarraju and Karau (2005) investigated the association between the five personality traits and individual differences in college students' academic motivation among 172 undergraduates. Students took part in the NEO Five-Factor Inventory (Costa & McCrae, 2000) and an Academic Motivations Inventory. They discovered a valid relationship and this engagement was best described by openness to experience and extraversion; achievement was best clarified by conscientiousness, neuroticism, and openness to experience; and lastly, avoidance was best described by neuroticism, extraversion, and an inverse relationship was found with conscientiousness and openness to experience.

Busato et al. (1998) studied the connection between some learning styles, the big five personality traits (neuroticism, extraversion, openness, agreeableness, and, conscientiousness), and achievement motivation. The finding showed the extraversion, openness, agreeableness, and conscientiousness with positive connection between achievement motivation and meaning, but neuroticism connection displayed undirected with learning style.

Moreno et al (2021) conducted a meta-analysis of the Big Five personality traits and various computationally derived indicators from written text, concluding that the computational analysis of written language can provide valuable insights into personality.

Kabboshan and Saeedirad (2022) conducted the relationship between four types of personality traits and writing anxiety. Their findings depict that extroverted students show less writing anxiety, but introversion and writing anxiety had a positive relationship.

Zaswita and Ihsan (2020) sought the impact of personality traits on students writing ability. The finding depicted the students who involved with difficulties in writing not by the cause of external factors like vocabulary or grammatical knowledge but also due to internal factor of personality traits.

According to O'Malley and Pierce (1996), a writing task should assess wider aspects of a text rather than being limited to grammar and mechanics. It should encompass more complex processes engaged in writing so that the instructors can identify the aspects of learning in which students perform differently. Understanding the nature of the task and the scoring criteria are of high significance in writing assessments. Djiwandono (2008) and O'Malley and Pierce (1996) have also emphasized the importance of a writing prompt as well as thorough instruction so that students can obtain a clear image of the connection between their writings and their scores.

Siyyari (2011) studied 196 Iranian male and female, adult undergraduate learners studying in various English fields. At first, a

language proficiency test and the NEO-FFI personality traits inventory were applied to identify the learners' language proficiency level and personality traits. Then, the students were randomly allocated to two experimental groups, undertaking self-assessment or peer-assessment of essay performance for 11 lessons, and a control group. Findings revealed that the Big Five had a very weak and insignificant connection to rating error in self-assessment and writing performance enhancement on account of self- and peer-assessment practices and the extent of development in self- and peer-rating accuracy, however, it had a relatively meaningful negative association with rating error in peer-assessment (Siyyari, 2011).

Research method

This section defines and justifies each procedural step pursued throughout different stages of this study including design, participants, instrumentation, procedure for data collection and statistical analyses of the study.

3.1 Design

This study employs a quasi-experimental design because, in educational research, it is not possible to randomly assign subjects to groups. About the impact of an intervention or treatment, even in situations where random assignment is not feasible. By using quasi-experimental designs, researchers can still control for potential confounding variables and make meaningful comparisons between groups. This allows them to conclude the effectiveness of an intervention or treatment, despite the limitations of not being able to randomly assign subjects. The present investigation employed two experimental groups that received instruction based on the DA methods on descriptive writing with concerning personality traits. And one control group that was taught using the regular method with traditional instruction.

3.2 Participants

The participants were selected based on Non-random selection and non-probability sampling of repeatable language institutes of Shiraz with an equal number of males and females who were trained online to enhance the generalization of the findings. A sample of 90 students was selected through using the Oxford Placement Test (PET); two separate tests of English Grammar, and Vocabulary were provided to students to check their homogeneity level before the treatment. Both tests included 40 multiple-choice questions (Oxford Test of English, 2021). Their proficiency level was provided by the website in the result section. The students were randomly assigned to three groups (two experimental, and one control group each consisting of 30 students) to help minimize selection bias and ensure that any differences in outcomes can be attributed to teaching techniques rather than preexisting differences among participants, and the participants' age range was between 18 and 35. Their first language was Persian to ensure their homogeneity before they entered the treatment. The number of learners had to be chosen cautiously as the study required qualitative data collection which was a time-consuming process. However, the researcher attempted to increase the number of participants as long as the deadline of the study did not limit access.

3.3 Instrumentation

3.3.1 Descriptive writing

Descriptive writing as a dependent variable refers to an individual's ability to write descriptive text. It involves the ability to describe objects, people, and events using sensory details and imagery. Descriptive writing ability is important for a variety of reasons, including academic success and effective communication. Dynamic assessments of descriptive writing ability are used to understand an individual's strengths and weaknesses in this area and to identify areas for improvement.

Brown (2007) has designed an analytic scoring rubric for descriptive writing which examines five aspects of writing, including content, organization, grammar, vocabulary, and mechanics. In the same manner, each of these five aspects was rated. Content weighs 30% as it has more priority in descriptive writing. Organization and grammar weigh 20% each since they play a more significant role than vocabulary and mechanics in writing. At last, vocabulary and mechanics weigh 15% each.

The validity of the instruments was guaranteed through seeking the confirmation of two TEFL professors. Survey questions and scoring rubrics were thoroughly reviewed to evaluate the content validity and ensure that each item was relevant to the context and research purposes. Based on the received feedback, revisions were made, and the reliability estimates were checked again. Moreover, inter-rater reliability estimates were conducted to assess the writings

3.3.2 Oxford Test of English

To ensure the homogeneity of the participants' English proficiency before the treatment phase, two separate tests were administered. The first test assessed the participants' grammar knowledge, while the second test evaluated their vocabulary skills. Both tests consisted of 40 multiple-choice questions and were based on the Oxford Test of English (2021).After completing the tests, the participants' proficiency levels were determined based on the results provided by the testing website.

3.3.3 Data Collection

Before starting treatments, the participants were checked through a related pretest. The control group received no DA-oriented and was provided only with traditional feedback. Two experimental groups were evaluated and provided with the needed DA-oriented help and pushed along ZPD to aid learner's writing skills. At the end of the study, the post-test of groups was administered to check the impact of the treatment. Analyzing the data through ANOVA tests and T-tests, it was revealed that the two models of DA increased the learners' writing abilities but were more effective in interaction group, and the lower impact was seen in the control group.

After the completion of the placement test to assure the homogeneity of the students, the Data Collection was conducted in three steps: pre-test, mediation, and post-test. Each step is explained below.

3.3.4 Pre-test

The researcher requested to write a descriptive essay before the treatment. The essays were collected, analyzed, and scored based on Brown's rubric for assessing descriptive writing according to the criteria given in Brown (2007). Students' scores are recorded for each participant to be analyzed later. No mediation was done at this stage. Then, they were randomly and equally assigned to interventionist, interactionist, and control groups. The mediator was an experienced EFL teacher and DA practitioner with a relevant research background and publication record.

3.3.5 Mediation

Two experimental groups attended five two-hour-long weekly sessions, after the pre-test. Throughout these sessions the instructor introduced and clarified the concept of descriptive writing along with the scoring criteria to help them understand the components and their significant role in the outcome.

To achieve this, the instructor presented the class with three sample essays to deconstruct based on the model. These essays were designed precisely for instructional purposes and featured all of the model's components. The instructor modeled the task for the first writing, while the second and third essays were practiced by the class. After a thorough analysis of the first three essays, students were asked to bring in a descriptive essay of around 300 words for each session.

General topics such as technology, travel and holidays, environment, education, and friends were assigned, and their works were reviewed in the lesson.

The instructor provided regular, traditional feedback (not following DA procedures) on the presence or absence of the components of a descriptive essay in the control group. The feedback was presented orally to the whole class. On the other hand, distinct mediatory moves were followed by the instructor for the interactionist and interventionist groups. For the interactionist group, moves were not pre-specified, and appropriate assistance could emerge from interactions and conversations on problematic areas during the lessons. Assistance was graduated and contingent, depending on the participant's responsiveness to each move. Mediation was highly sensitive to ZPD (Zone of Proximal Development). For the interventionist group, the mediator employed a five-level prompting inventory for mediation, including:

1-Collaboratively reading a problematic paragraph

2-Asking whether there is an error or something is missed

3-Drawing attention towards a problematic section and asking whether there is an error or something is missed

4-Demonstrating the wrong or missing part

5-Detecting the wrong or missing section and clarifying it (Kushki et al., 2022).

These prompts were offered sequentially based on a predetermined scheme, moving from the most implicit and general aspects towards the most explicit and detailed aspects for a specific problematic section. Some clarifications might have been given in Persian based on the student's needs and the instructor's understanding. Sessions were recorded and transcribed for further analysis.

3.3.6 Posttest

One week after the last session, the students were asked to write a descriptive essay on a new topic. However, the topic was chosen from one of the other general areas for writing, such as sports, music, health, or books and films, with a similar theme and level of difficulty. The time limit for both the pretest and posttest was set at 40 minutes. Post-test essays were collected and, scored using the same scoring procedures as the pre-test essays.

After collecting the assessed writing samples, participants were asked to fill out the NEO-FFI inventory. A Persian equivalent of the Five-Factor Personality Inventory (NEO-FFI) questionnaire which includes sixty items was applied to assess five facets of the personality traits of the student, including neuroticism, extraversion, openness, agreeableness, and conscientiousness thorough examination of these facets provides a distinctive image of these characteristics in a person. This inventory was designed by Costa and McCrae in2000, targeting adults aged 17 and above. It was rated based on a five-point Likert scale. The reported reliability index is about 60, however, the reliability of the translated version was assessed again. Subsequently, the collected data was classified into different categories based on the personality traits and treatment groups. Based on the results of the inventory, learners in each group were labeled as one of the personality types, and these types were considered as levels of a nominal scale describing the personality traits of the students. This nominal variable was included in the analysis as either a covariance for the independent variable or a moderating variable.

To check and understand the students' development of descriptive skills, the data was analyzed in terms of conceptual changes in their understanding of the descriptive elements and their ability to use these elements successfully in written tasks. The analysis was divided into two sections:

conceptual development and operational development.

For the analysis of conceptual changes, the approach proposed by Nassaji and Swain (2000) was followed. They emphasized counting micro-genetic and macro-genetic moves. A micro-genetic move was defined as an interaction between the learner and the mediator that led to a mediation episode within the same session. The macro-genetic analysis involved tracking learners' development across multiple sessions.

Accordingly, the development from one session to the subsequent session was observed, focusing on moments when a mediated understanding of a particular element in one session could be associated with the development of the same element in the next session. The evaluation criteria at this stage considered the presence or absence of elements, as follows:

0= Feature is not present at all

1= Feature is present to some extent but not well-developed

2= Feature is present and well-developed

To identify micro-genetic and macro-genetic instances and assign element-specific scores, the data was coded first and then scored independently by two raters. Inter-coder reliability was calculated next. The descriptive performance of each student in the pretest and posttest was compared to check their improvement based on the components of the writing rubric. This clarified which type of dynamic assessment was more helpful in descriptive writing ability. Next, correlational analyses were applied to understand the difference between students' performance in descriptive writing about their personality traits in the first place. Finally, multivariate analyses were conducted to probe any significant difference among the five personality traits (neuroticism, extraversion, openness, agreeableness, and conscientiousness) in terms of descriptive writing (content, organization, grammar, vocabulary, and mechanics).

The non-random selection of the participants and also random assignment of the participants in two experimental groups in this study led to a quasi-experimental design. It consisted of two experimental groups. The dependent variable was writing, while the independent variable was teaching techniques with two conditions: interaction and intervention methods. Language proficiency (intermediate level of the participants was the control variable of the study

To test the null hypothesis of the current study, the researcher used the following statistical analyses: The descriptive statistics that were related to mean and standard deviation measurement of the PET for homogenizing the participants and also for the writing tests of the current study were calculated. Also, reliability of all scores on the entire test was conducted by Cronbach alpha and item analysis. Inter-rater reliability of the scores given by both raters was calculated through the Pearson correlation formula, using the SPSS software program:

1. Pretest questionnaire: This assesses the demographic information, level of English proficiency, and personality traits of the participants.
2. Writing task: Participants described a text in English, which was assessed for its quality and adherence to the prompt.
3. Post-test questionnaire: This asked about the participants' experience during the task, their level of motivation, and their perceived improvement in their writing skills.

Descriptive statistics (mean, standard deviation) was used to analyze the data collected from the pre-test and post-test writing assignments and questionnaires. The results from the writing task were analyzed using a rubric designed to evaluate the quality of the writing samples.

The researcher used an independent paired sample t-test to compare the pre-treatment writings of the participants of the two groups. A t-test was also used to compare post-test writing scores of the two groups to discover which treatment: interactionist and interventionist had a greater impact on intermediate learners' writing achievement.

Research findings

The purpose of this study was to investigate the comparative impact of DA on English descriptive essay writing and to find out which of the two types of DA, Interactionist and Interventionist better assists the development of Descriptive Writing. Besides, the relationship between specific components of Descriptive Writing performance in terms of Personality Traits was investigated.

Initially, a preliminary English Test PET sample was piloted on a group of 90 females and male EFL learners with similar characteristics to the target group, and then the reliability of the test was calculated through Cronbach alpha using R program. The reliability of the PET turned out to be 0.70.

To follow the purpose of the study, and to homogenize the participants a (PET) was conducted among 90 students. The distribution of the scores was normal.

In this section, a comprehensive analysis of the key findings obtained from the integration of data collected through descriptive writing essays and personality traits questionnaire is presented. Below the detailed findings are presented.

Validation Q1: To survey if the dynamic or non-dynamic assessment have impact on the development of Iranian EFL learners' descriptive writing ability. The Descriptive statistics and paired sample t-tests were used to compare pretest and posttest scores before and after treatment on one control and two experimental groups. The data was analyzed and two experimental groups revealed their writing ability had improved, but the control group showed a lower effect. So, the first research question is validated which can be observed in tables 1, 2, 3, 4, 5, 6 and their explanations. Thus, dynamic assessment that impact on the development of learners' writing ability.

Table 1: *Descriptive Statistics: Compare Dynamic and non- dynamic assessment*

	group	Mean	Std. Deviation
Content	non-dynamic	19.10	2.040
	dynamic	23.15	4.475
	Total	21.80	4.280
Organization	non-dynamic	15.17	2.547
	dynamic	16.62	3.054

	Total	16.13	2.961
Grammar	non-dynamic	14.83	2.627
	dynamic	16.65	2.928
	Total	16.04	2.945
Vocabulary	non-dynamic	11.73	1.337
	dynamic	13.68	2.029
	Total	13.03	2.041
The Mechanics	non-dynamic	11.73	1.337
	dynamic	13.68	2.029
	Total	13.03	2.041

Table 1. Comparison the dynamic and non-dynamic methods, and depicts the impact of dynamic method increased the mean scores of dynamic groups.

Table2: *Descriptive Statistics of Pre and Post-test Scores of Interactionist Group*

	Mean	Std. Deviation	Std. Error Mean
Content -pre Interaction treatment	19.80	4.41	0.80
Content-post Interaction treatment	24.50	4.58	0.84
Organization -pre Interaction treatment	13.27	3.14	0.57
Organization-post interaction treatment	17.40	3.12	0.57
Grammar-pre interaction treatment	13.23	3.22	0.59

Grammar -post interaction treatment	17.37	2.70	0.49
Vocabulary -pre interaction treatment	10.53	2.32	0.42
Vocabulary -post interaction treatment	14.23	2.13	0.39
Mechanics -pre interaction treatment	10.50	2.32	0.42
Mechanics -post interaction treatment	14.23	2.13	0.39
Total -pre interaction treatment	67.27	13.18	2.41
Total -post interaction treatment	87.67	12.97	2.37

The result presented in Table 2 revealed the interactionist group received higher posttest mean scores compared with the pretest scores. If the differences between pre and posttest mean scores is significant, Paired Sample t-test were run on groups' pre and post-test. Table 3 summarizes the result of the paired sample t-test.

Table 3: *Paired Sample t-test to Compare Pre and Post-test Scores of the Interactionist Group*

Components descriptive writing	Std. Deviation	Std. Error Mean	**95% Confidence Interval**		t	p-value
			Lower	Upper		
Content	**3.83**	**0.70**	**-6.13**	**-3.27**	**-6.71**	**.000**
Organization	**2.58**	**0.47**	**-5.10**	**-3.17**	**-8.77**	**.000**
Grammar	**2.87**	**0.52**	**-5.21**	**-3.06**	**-7.88**	**.000**
Vocabulary	**2.23**	**0.41**	**-4.53**	**-2.87**	**-9.09**	**.000**

Mechanics	**2.29**	**0.42**	**-4.59**	**-2.88**	**-8.94**	**.000**
total	**12.88**	**2.35**	**-25.21**	**-15.59**	**-8.68**	**.000**

Paired Sample t-test shows the interaction treatment affects the component of descriptive writing significantly. According to table2 total writing score from the pretest (M=67.27, SD=13.18) to the post test (M=87.67, SD=12.97), t (29) = - 6.71, P<.05.

Table 4: *Descriptive Statistics of Pre and Post-test Scores of Interventionist Group*

	Mean	Std. Deviation	Std. Error Mean
Content_ pre Intervention treatment	19.80	4.41	0.80
Content_ post Intervention treatment	21.80	4.00	0.73
Organization_ pre intervention treatment	13.27	3.14	0.57
Organization _post intervention treatment	15.83	2.82	0.51
Grammar_ pre intervention treatment	13.23	3.22	0.59
Grammar_ post intervention treatment	15.93	3.02	0.55
Vocabulary_ pre intervention treatment	10.53	2.32	0.42
Vocabulary_ post intervention treatment	13.13	1.80	0.33
Mechanics_ pre intervention treatment	10.50	2.32	0.42

Mechanics_ post intervention treatment	13.13	1.80	0.33
Total_ pre intervention treatment	67.27	13.18	2.41
Total_ post intervention treatment	79.93	12.44	2.27

The comparison of pretest and posttest of the interventionist treatment showed the higher scores in post-test. If the differences between pre and posttest mean scores is significant, Paired Sample t-test were run on groups' pre and post-test. The Table 5 shows pertained result.

Table 5: *Paired Sample t-test to Compare Pre and Post-test Scores of the Interventionist Group*

Components descriptive writing	Std. Deviation	Std. Error Mean	95% Confidence Interval		t	p-value
			Lower	Upper		
Content	5.43	0.99	-4.03	0.03	-2.02	.053
Organization	3.85	0.70	-4.00	-1.13	-3.65	.001
Grammar	3.91	0.71	-4.16	-1.24	-3.79	.001
Vocabulary	2.80	0.51	-3.65	-1.55	-5.09	.000
Mechanics	2.79	0.51	-3.67	-1.59	-5.18	.000
Total	17.20	3.14	-19.09	-6.25	-4.04	.000

The paired sample t-test intervention treatment affects the component of descriptive writing. The total score from the pretest (M=67.27, SD=13.18) to the post-test (M=79.93, SD=12.44) of intervention treatment on the components of descriptive writing significantly expect content. Table 6 illustrates the result of paired samples t-test comparing the control group's pre and posttest.

Table 6: *Paired Sample t-test to Compare Pre and Post-test Scores of the control Group*

		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	p-value
					Lower	Upper			
Pair 1	Content - Content	-.03	.183	.033	-.102	.035	-1.00	29	0.33
Pair 2	Organization-Organization	-.03	.183	.033	-.102	.035	-1.00	29	.0.32
Pair 3	Grammar - Grammar	-.167	.379	.069	-.308	-.025	-2.408	29	.023
Pair 4	Vocabulary - Vocabulary	-.167	.379	.069	-.308	-.025	-2.408	29	.023
Pair 5	Mechanics - Mechanics	-.167	.379	.069	-.308	-.025	-2.408	29	.023
Pair 6	Total-total	2.67	2.54	0.46	1.72	3.61	5.76	29.00	0.00

The paired sample t-test of control group shows the mean scores increased, but less than experimental groups

Validation Q2. To inquire if which of the two types of DA better assist the development of descriptive writing ability. The one-way ANOVA test was conducted to examine the effects of the interactionist and interventionist approaches on the development of descriptive writing. The test indicated that these approaches assisted in the development of descriptive writing, albeit in different ways. The ANOVA test was significant P-value<0.05) and the effect size of the five post hoc- test demonstrated higher significance.

Table 7: *One-way ANOVA to Compare Three Groups in terms Post-test Descriptive writing scores*

	Sum of Squares	Df	F	p-value

Content	Between Groups	437.400	2	15.949	.000
	Within Groups	1193.000	87		
	Total	1630.400	89		
Organization	Between Groups	78.867	2	4.890	.000
	Within Groups	701.533	87		
	Total	780.400	89		
Grammar	Between Groups	96.822	2	6.240	.003
	Within Groups	675.000	87		
	Total	771.822	89		
Vocabulary	Between Groups	94.200	2	14.809	.000
	Within Groups	276.700	87		
	Total	370.900	89		
Mechanic	Between Groups	94.200	2	14.809	.000
	Within Groups	276.700	87		
	Total	370.900	89		

According to Table 7, there was a statistically significant difference at the p<.05 level in the content (F(2,87)=15.94), Organization (F(2,87)=4.89),Garammar(F(2,87)=6.24), Vocabulary (F(2,87)=14.80), and Mechanic (F(2,87)=14.80). In the next step to find out exactly where the differences among the groups occurred, the post-hoc comparisons using the Tuckey HSD* test was run. The significant results of the post-hoc test are shown in Table 8. **(honestly significant difference) test*

Table 8 :*Summary of Post-hoc Test Results*

Variable	Group differences	p-value
Content	Interaction> Intervention	.016
	Interaction>Control	.016
	Intervention> Control	.000
Organization	Intervention> Control	.009
Grammar	Intervention>Control	.002
Vocabulary	Interaction> Intervention	.049
	Interaction> Control	.009
	Intervention>Control	.000
Mechanics	Interaction> Intervention	.049
	Interaction > Control	.009
	Intervention>Control	.000

The results of the post-hoc analysis indicate significant differences between the interactionist and interventionist DA methods concerning the components of descriptive writing ability. The interactionist group outperformed the interventionist group with mean scores of M = 24.50, SD = 4.58 for Content, M = 14.23, SD = 2.13 for Vocabulary, and M = 14.23, SD = 2.13 for Mechanics. This suggests that the interactionist approach is more effective in enhancing these specific aspects of writing. However, it is noteworthy that no significant differences were found between the two groups regarding Organization and Grammar, indicating that both methods may equally support learners in these areas. Furthermore, both the interactionist and interventionist groups demonstrated superior performance compared to the control group across Content, Vocabulary and Mechanics components of descriptive writing, highlighting the efficacy of DA approaches in improving EFL students' writing skills in these components. In addition, intervention group outperformed the control group in Organization and Grammar components.

ValidationQ3. To find out if there is any relationship between students' performance in descriptive writing and personality.

Table 9: *Multiple Regression*

Personality traits model Regression	Bound	T	Sig.	95.0% Confidence Interval for B	
	B			Lower Bound	Upper Bound
Neuroticism	-.720	-2.141	.037	-1.394	-.046
Extraversion	.078	.209	.836	-.671	.827
Openness	.486	1.109	.272	-.392	1.363
Agreeableness	-.364	-.835	.408	-1.237	.510
Conscientiousness	-.199	-.544	.588	-.933	.534

Table 9: The impact of the five factor personality traits on participants' writing scores. It was used multiple regression to analyze the relationship between students 'performance in descriptive writing and their personality traits. By conducting regression analysis was found the strength and direction of relationship between five aspects of personality traits and writing skills. The variables illustrated extraversion, and openness with positive direction, neuroticism, agreeableness, and conscientious with negative direction

Table 10: *Regression Weights: (Group number 1 - Default model)*

			Estimate	S.E.	C.R.	P	Label
total	<---	Neuroticism	-.720	.289	-2.495	.013	par_9
total	<---	Extraversion	.078	.337	.232	.817	par_10
total	<---	Openness	.486	.419	1.159	.246	par_11
total	<---	Agreeableness	-.364	.384	-.946	.344	par_12
total	<---	Conscientiousness	-.199	.322	-.619	.536	par_13

The effect of five aspects of personality traits on total components of description writing.

Table10. Shows Coefficient or Estimate, Standard deviation, and Covariance.

Neuroticism impacts on total writing significantly with negative covariance and P-value=.013

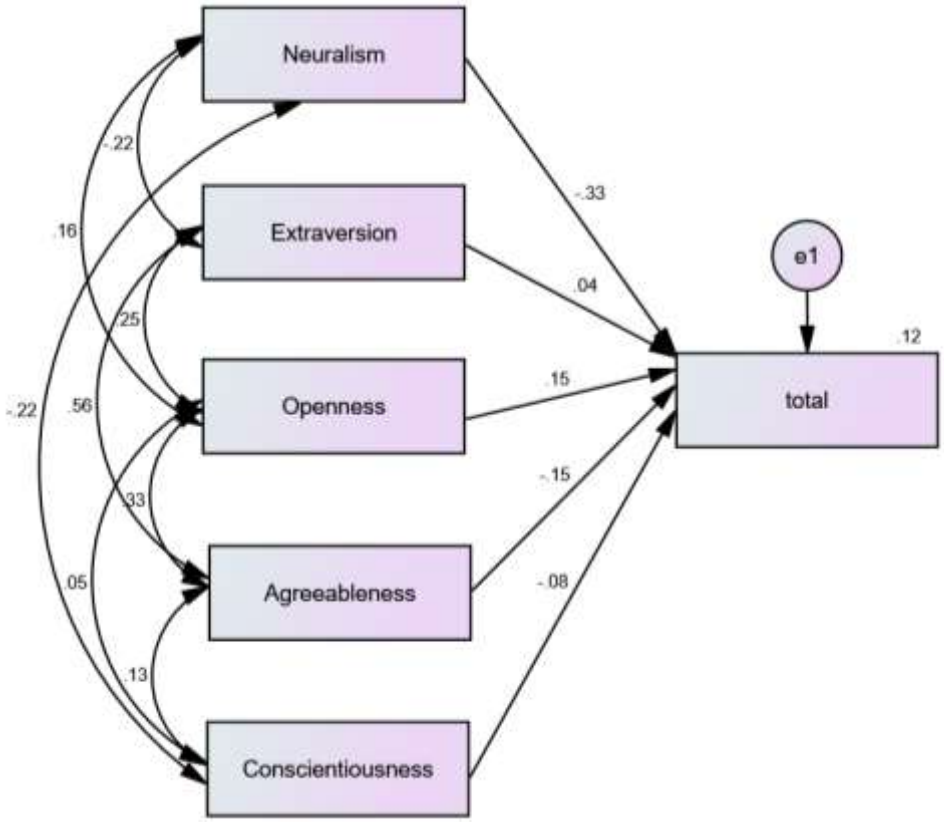

Figure 1

The regression and correlation between five aspects of personality traits, and total components of descriptive writing. Estimate of Neuroticism=-**.33, Extraversion=.04, openness=.15,** Agreeableness= -.15, Conscientiousness=-.08

Validation Q4. To verify if there is any relationship between students' attention to specific components of descriptive writing (namely content, organization, grammar, vocabulary, and mechanic) performance in terms of personality traits?

Table 1 : *Regression Weights: (Group number 1 - Default model)*

			Estimate	S.E.	C.R.	P	Label
Content	<---	Neuroticism	-.302	.095	-3.171	.002	par_9

Content	<---	Extraversion	.015	.111	.137	.891	par_10
Content	<---	Openness	.190	.138	1.376	.169	par_11
Content	<---	Agreeableness	-.221	.127	-1.742	.082	par_12
Content	<---	Conscientiousness	-.118	.106	-1.107	.268	par_13

Neuroticism one of the five aspects of personality traits impacts on content. (One of the components of descriptive writing) that is significant (p-value=0.002) with negative covariance.

Table 12: *Regression Weights: (Group number 1 - Default model)*

			Estimate	S.E.	C.R.	P	Label
Organization	<---	Neuroticism	-.157	.068	-2.321	.020	par_1
Organization	<---	Openness	.079	.098	.800	.424	par_2
Organization	<---	Agreeableness	-.055	.090	-.608	.543	par_3
Organization	<---	Conscientiousness	-.037	.075	-.488	.625	par_4
Organization	<---	Extraversion	-.005	.079	-.063	.949	par_5

Neuroticism one of the five aspects of personality traits impacts on organization that is significant (p-value=0.02) with negative covariance, but there is no impact on vocabulary, mechanic, and grammar.

Discussion and conclusion

This study examined the effects of dynamic versus non-dynamic assessment on the development of descriptive writing skills among Iranian EFL learners. The results indicated that dynamic assessment positively impacted the experimental groups when compared to the control group.

Additionally, the research aimed to identify which of the two types of dynamic assessment—Interactionist or Interventionist—was more effective in enhancing descriptive writing skills. The findings revealed that both types of dynamic assessment had a positive influence, with the interactionist approach demonstrating significantly greater effectiveness than the interventionist approach.

Another aspect of this study explored the relationship between participants' performance in descriptive writing and five personality traits: Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. The analysis showed a significant correlation between these personality traits and the overall writing scores.

Furthermore, the investigation looked into the relationship between the five components of writing—Content, Organization, Grammar, Vocabulary, and Mechanics—and the five personality traits. The results indicated that this relationship was nearly significant.

The present study examined the impact of the Dynamic and Non-Dynamic methods, and the interactionist and interventionist methods as the sub-branches of Dynamic Assessment (DA) on participants' descriptive writing. It was declared that the dynamic method had a significant impact on participants' writing skills. As a result of the analyses collected, two types of (DA) interaction and intervention treatments positively connected to descriptive writing, and showed significant differences between the two groups' mean scores. Therefore, the null hypothesis fails. Thus, it was concluded that there was a significant difference between the impact of interaction and intervention groups on EFL learners' writing achievement. In other words, the two treatments were effective in the writing development of the learners. There are significant differences between the two groups, and the interactionist group received a higher mean score in descriptive writing. On the other hand, the control group displayed a weak relationship.

The observed significant impact of DA is in line with the results of other studies conducted in this field. Kushki et al (2022) have used the Vygotskian principle of sociocultural theory (SCT) and dynamic assessment to examine the impact of the mediation of instructors through written commentaries on the writing tasks of the students. The findings of this study prove that DA-informed meditation has led to the development of the participants' argumentative writing skills.

Shrestha and Coffin (2012) have conducted similar research to investigate the effects of tutor mediation in the context of academic writing. They have concluded that the interaction between tutor-students provided via emails was effective in identifying and responding to the areas in which the students needed more support.

The current study illustrated the 5 components of descriptive writing (namely, content, organization, grammar, vocabulary, and mechanics) and 5 aspects of personality traits (namely, neuroticism, extraversion, openness, agreeableness, and conscientiousness) which are related to each other. The variable neuroticism relates significantly and indirectly to content with negative covariance. The organization was connected positively to descriptive writing evaluation. The variable extraversion affects vocabulary significantly and conscientiousness directly affects vocabulary.

The significant impact of personality traits observed in this study is consistent with the finding of Busato et al (1998) about the connection between some learning styles, the five personality traits, and the enhancement of motivation. The variable extraversion is positively and directly connected to meaning-directed learning style. Conscientiousness and agreeableness were associated with the meaning and application-directed styles. Neuroticism was positively connected to the undirected learning style and negatively to the meaning-directed style. The findings of this study are also in line with the findings of Komarraju and Kavau's (2005) study on the association between five personality traits and individual differences in college students' academic motivation among 172 undergraduates who took part in the NEO FIVE factor Inventory (Caste &McCrae, 2000) an academic motivation Inventory. They discovered a valid relationship and this engagement was best described by openness to experience and extraversion: achievement best clarified by conscientiousness. This

study conducted by O'Connor and Praenomen (2007) is in line with the present study in finding that conscientiousness is most constantly and strongly connected to education success, and openness to experience is positively connected to scholastic achievement. However, extraversion is negatively associated with the same principle.

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