



Differentiated instruction to develop Al-Azhar students' writing fluency

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ABSTRACT

Writing in English with confidence is a matter of great concern for non-native speakers. Since writing fluently requires a multi-dimensional mastery of language skills, students always regard it as an open question. This paper investigates writing skills which seem to be the least favored and most problematic skills to acquire in foreign language acquisition. The purpose of the study was to investigate the impact of Differentiated Instruction (DI) on the English writing fluency of the students in the first year of secondary education in Al-Azhar Institutes. To answer the study questions, the researcher adopted the quasi-experimental approach using the one-group design. The study subjects were thirty two (32) students who had been randomly chosen from the Secondary education of Al-Azhar Institutes in Sohag governorate, Egypt. The sampling method is probability sampling which means that every individual in the population has a chance of being selected. The researcher used a program based on Differentiated Instruction's theory in teaching the study group in the second term of the year (2018-2019). The program consisted of 12 units. Each unit has four lessons. To measure the effect of the program, the researcher designed and validated a writing fluency test to be used as a pre and post-test. The data of the study were analyzed, using SPSS 19 software, to confirm the test reliability. The researcher used a t-test to spot the statistical differences in students' performance before and after the intervention of the program. The study indicated that there are statistically significant differences at the level of (0.05) in English writing fluency skills of the first-year students in favor of the post-test. This meant that the use of the program had a significant impact on developing the students' writing fluency at Al-Azhar Institutes. Based on those findings, the study recommended implementing the suggested program to bring about better outcomes in students' writing fluency. It also was suggested that further research should be conducted concerning other language domains such as reading and listening.

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INTRODUCTION

Language is a means of reasoning and conveying cultures among generations and nations. It is also a way of communication among individuals. Hence, many countries engaged in teaching other languages in their syllabi to their students. Certainly, language cannot exist in a vacuum and there is an inevitable kind of “transfusion” at work between language and culture (Fairclough, 1989). The objective of language is to communicate meaning. When we begin to develop our language abilities, the main purpose is to communicate or interact with others (Kuo & Lai 2006). The fact that English is the language of science and the easiest one contributes to the increase in the importance of English in Egypt. English has become an important asset for job seekers in multinational businesses in Egypt. Accordingly, the main objective of teaching English at Al-Azhar Institutes is to empower students with the potential to write and communicate in English so that they become able to cope with the challenges of modern education. Therefore, there is a dire need to furnish Egyptian secondary stage students with adequate writing skills as attention is given to written English at the secondary stage.

Writing is the courier that can transform the feelings and views of persons into written form as it is often seen as a burdensome process requiring attention and accuracy, and hence something to be done carefully. Writing brings a lot of advantages to expressing one's personality, fostering communication, developing thinking skills, making logical and persuasive arguments, giving a person a chance to later reflect on his/her ideas and re-evaluate them, providing and receiving feedback and preparing for school and employment (Klimova, 2013). However, a lot of writing is done under the strain of time, when fluency in production is of great importance. This occurs, for example, in note-taking, setting examinations, writing emails and letters, and unfortunately, often in completing assignments. To develop students' potential to write effectively in a foreign language, different kinds of writing should be involved in the writing program, such as careful writing, writing for fluency, and extensive writing aimed at quantity such as diary, personal letter, and narrative writing.

Janovsky (2021) defines Fluency as "A student's ability to write with a natural flow and rhythm." Fluent writers use grade-appropriate word patterns, vocabulary, and content while Paradis (2009, p.6) refers to it as "The absence of pauses and other indicators of word-finding (or grammatical) difficulty". According to Nation & Newton (2009), Fluency activities typically focus on the communication of messages, not language forms, and get the learners to do easy tasks at faster-than-usual speeds. McCarthy (2014) ensures that teachers tend to think about building fluency in terms of reading, but now more than ever, teachers should be helping their students build writing fluency as well. Readers who do not read smoothly use much of their cognitive energy to interpret individual words and phrases, making it difficult for them to focus on the hint of what they read. Correspondingly, students who had a shortfall in writing fluency dedicate lots of mental power to form individual words or basic sentence formation, making it harder for them to concentrate on delivering their thoughts and feelings adequately.

Differentiated instruction is not merely an instructional strategy; but it is rather a critical teaching and learning philosophy that all ambitious teachers should address. Tomlinson & Imbeau (2010) describe differentiation as “classroom practice with a balanced emphasis on individual students and course content” (p. 14). They posit that at the core of the classroom practice of differentiation is the modification of curriculum-related elements such as content, process, and product, based on student readiness, interest, and learning profile. Tomlinson (2010) adds that children learn well in various ways and with varying degrees of structure. Differentiated Instruction, then, had drawn on many theories that call for the same direction. Differentiation has its deep roots and origins in previous theories upon which Tomlinson built her theory like Piaget's constructivist theory, Vygotsky's zone of proximal development, and Gardner's theory of multiple intelligences. In accordance with Piaget's theory, the learner interacts with objects and events available in the physical and social environment and therefore comprehends the objects or events using the process of assimilation, accommodation, and equilibration. The learners, therefore, construct their own conceptualizations and use them to generate solutions to problems. This theory also suggests that humans create and construct knowledge as they try to bring meaning to their experiences.

In the differentiated classroom, teachers should facilitate the learning process by organizing learning activities and using a variety of aid materials according to the level of students' cognitive structure to enable them to construct knowledge through their experiences. The zone of proximal development is the distance between students' ability to perform a task with assistance, i.e. under adult guidance or with peer collaboration, and the student's ability to perform the task without any assistance. According to Vygotsky (1978), learning occurs in this zone in addition to the time that the learner is able to comprehend certain information that he/she cannot access earlier or which leads to building a structure to formulate the new information. In differentiated instruction, first, the teacher needs to identify what the students can achieve without assistance and for further learning of the more challenging tasks, differentiate learning tasks accordingly, and provide academic support from the teacher as well as from more outstanding peers so that students acquire the necessary academic skills for independent learning.

Tomlinson, the originator of the theory, (2015) proposed building a conceptual map based on Differentiated Instruction (DI) in classrooms. She mentioned six effective DI features, including the importance of anticipatory curriculum and instruction, the use of small teaching-learning groups in the class hall, various objects used by individuals and small groups of students, addressing learner needs (pace), and focusing on knowledge-centered, and finally learner-centered teaching. Then, the author showed five differentiated aspects, including teaching content: in the textbooks, tutors can respond to students in varying degrees and demands; in the teaching method, it seems to be diverse, different in the process, via the discussion group work. In case those students can be immersed in such a changing setting, they can feel freer to express their learning aftermaths. As per differences in the teaching milieu: teachers can create a classroom-learning atmosphere to guide students. Learning milieu can be differentiated through teachers' giving students different spaces, different times, different teaching aids, and the like. Teachers who implement differentiated teaching can comprehend students' different learning styles and can use different instructional materials, or teaching methods to maximize their learning. Differentiated classrooms are distinguished by being learner-centered, knowledge-based, assessment-centered, and community-based (Coubergs, Struyven, Vanthournout, & Engels, 2017; Tomlinson, 2015).

This study investigates the effect of Differentiated Instruction in helping ESL students develop their English writing fluency. The study is thus significant because it is designed to explore in-depth whether students produce better writing when working according to a differentiated environment than when working in the traditional classroom environment. The use of Differentiated Instruction provides an opportunity for them to identify and comprehend elements of writing fluency like the mechanics of writing (i.e. choosing structures, punctuation, spelling, and format of words). Since this is the first study designed specifically to explore in detail the effectiveness of the Differentiated Instruction for Azharite students, the findings will pave the way for further studies to be carried out globally as well as in other Egyptian Azharite institutes.

LITERATURE REVIEW

Components of fluent writing

Fluent writing comprises multiple constituents that make the writing more fluent and seamless. Among these constituents are lexis, structures, mechanics of writing, word choice, and context. To be able to use a particular lexical item correctly and distinguish between its various meanings (i.e. phrasal verbs), students must begin using it in its natural context as soon as possible. Students can begin using language creatively even as beginners. In addition to practicing lexis, grammatical structures can also be practiced by the means of writing. Learning grammar is according to Scrivener (2011), a complicated process where learning the rules does not necessarily mean that the student can use them himself and understand them. He points out, that there should be some way that students can transfer this studied knowledge into a living ability to use the language. Writing can serve as a means of practicing the newly acquired grammatical structures as well as the language patterns that students learned in the past. Poems, stories, jokes, articles, fairytales, etc. can focus on practicing various aspects of grammar - be it tenses, participles, articles, parts of speech, passive constructions, conditionals, etc. In composition, 'mechanics' means the recurrence of words, to how they are spelled or arranged on paper. A simple example of mechanics is indenting the

first word of each paragraph. Conventions of writing need that a sentence beginning is capitalized and ends with full-stop punctuation (period, question mark, or exclamation point).

Appropriate strategies for developing writing fluency

Teachers have to enjoy methods that provide additional supports to address a broad range of writing skills while concurrently developing student use of a structured writing process that produces more well-versed and free writers. Previous studies indicate that teaching writing strategies, planning, editing, goal-setting, and note-taking generated apparent positive impacts on writing quality. Project-based learning is more than the simple incorporation of a project; it is experiential and meaningful learning. Project work is a learning experience that seeks to provide students with knowledge from various areas of learning. It is ample and integrative and can be applied to real-life situations. These aspects can be considered to foster meaningful written production because students are not only learning a language but are also learning through a language. Specifically, this process involves multi-skill activities which focus on a theme of interest rather than on specific language tasks.

According to Getachew (2014), many writers have also stressed the importance of pre-writing activities in content area classes for producing organized and enriched essays and reports. Students should plan their ideas and decide on their relationship order by using, for example, the techniques of brainstorming, quick-free writing, browsing sources, reflecting, etc. Meta-cognitive instruction should also include the management of emotions that go with the mental stress of the students at a time of confronting difficult tasks, uncertainties, mistakes, and familiarities. Less proficient students, especially those who have continually experienced academic failure, must be taught self-motivational strategies for confronting problems that arise during the writing process.

Fluency difficulties encountered by students

Tolesa (2014) classified problems in writing as Psychological problems, which are problems related to the writer's sense of isolation while writing because of the absence of any physical interaction and feedback from the teacher. The students also face linguistic hardships such as grammatical problems, sentence structure problems and problems with diction are linguistic problems that prevent students' effective writing in English Grammatical Problems are also one of the problems in students; writing as they have some problems in their second language writing, like using verbs that take different forms depending on tense and subjects they are used with, they create problems for a second language or foreign language writing students in addition to problems with subject-verb agreements, pronoun references, and connectors. Those students who have the problem of writing good sentences structures are unable to produce longer sentences requiring subordination and coordination. Cohesive devices are crucial in writing.

Benefits and challenges of applying differentiated instruction in the EFL classroom

To be able to successfully differentiate, a teacher must know his/her students well. At the core of differentiated instruction is the relationship between the educationist and the students (McCarthy, 2014). The learning in the classroom should be driven by data collected by the teacher from the students, rather than the textbook (Reese, 2011). It is essential for language learners to have a variety of texts, such as storybooks, news articles, picture books, and web pages, so they can be exposed to a variety of authentic languages. Offering foreign language learners content-specific material at levels that they can read successfully enables them to get key vocabulary and information. Materials at the appropriate difficulty levels could provide students with the scaffolding needed to develop stronger reading skills. Teachers must be careful to differentiate the material but not have different materials.

Differentiated instruction activities and techniques

The advent of technology proliferates the evolution of social media, which creates a massive breakthrough in different aspects of life, especially in education. Teachers play a crucial role as they adapt to the new era of an educational system where students with special needs are mainstreamed in the regular learning environment. Students' success in learning is attributed to teachers' effective techniques, methods, and approaches to deliver quality and meaningful learning to diverse students regardless of religion, ethnic group, race, culture, and disabilities (Dela Fuente, 2021). Since DI directs instructors and educationists to vary their resources to meet the student's needs and satisfy their interests, four techniques are adopted and stressed that comply with Web 2.0 Technologies. They include some technologies like Photo Story 3, YouTube videos, Visualization, and Mind-mapping. Photo Story is a free application that allows users to create a visual story from their digital photos, in which the user can upload certain photos they take or download via the internet. According to Hillar (2012), a mind map is known as one of the most efficient tools to think, recollect, and organize ideas in a visually friendly way. Desoky (2021) stressed the importance of taking photos for Egyptians and the motive of "recording moments". It seems that contemporary Egyptians are not different from ancient Egyptians, as this study showed that young participants chose to record moments as the first impulse to photograph themselves, and this became associated with the use of modern technology and smartphones. This can be utilized in making videos from photos and making a description or a review of their experience to enhance writing fluency. Bukhari (2016) states that mind mapping is the most effortless way to promote information in a human mind and collect information from outside the brain. Riswanto (2012) researched the appropriateness of mind mapping while providing training in writing. Results showed a vast distinction was present in the writing accomplishment of the students taught using the strategy of mind mapping.

Rennie, (2012), suggests that YouTube also has an important role to play in starting discussions and writing tasks. Oddone (2011) investigated the use of YouTube videos and websites in the auditorium. They can be deemed as audiovisual material, which can be implemented to teach other subjects through English with low-achievers. Pratiwi (2011) and Anggraeni (2012) reported a study in which the video helps the students learn to investigate main ideas, organize them, choose appropriate words to create sentences and paragraphs, and produce accurate sentences in terms of grammar and use spelling and punctuation in writing. Consequently, YouTube is efficacious in enhancing better writing in English. Serrato (2016) devised the Watch-think-write strategy in which a teacher can begin with documentaries like National Geographic Abu Dhabi and edit them with some software. In the "Watch" part, students watch the section, and no writing is allowed. Regarding the "Think" part, the whole class or small group discusses the segment, and no writing is either. In the "Write" part, students can aggregate the new information in their guided notes and even submit a summary or pose new questions to be answered.

Differentiating classrooms and integrating technology

Crescent & Lee (2011) argue that technology is considered an important and effective tool in language learning nowadays. It plays a major role in facilitating teaching and learning. Technology, namely, includes computers, mobile phones (smartphones), and the internet. Making use of and involving some technological apparatuses may motivate students and teachers to do their traditional assignments in diverse and charming ways. Technological devices may make the educational environment different from the traditional way that concentrates completely on the classroom in giving information to learners to a new way of learning outside the classroom. Rajput & Shah (2021) argued that Computer-Assisted Language Learning (CALL) is an emerging direction that has greatly affected traditional theories of learning foreign languages. This new direction has developed creative techniques and the most modern pedagogies for teachers and students of all levels. Students can utilize online tools to help them develop their vocabulary and collocation. This opinion was supported by the Deliana et. al. (2021) study, which found that even native English speakers consulted Google Scholar (GS) to revise and correct about 62% of their collocations. In addition, scholars, researchers, instructors, and students checked Google Scholar articles to improve and correct their language.

Online and blended learning programs can grant differentiated learning choices. The programs can be fully online, meaning that content and instruction are delivered through the Internet, or blended, meaning that programs use both online and face-to-face instruction. Some online and blended learning courses comprise computer software and proprietary packaged curricula that teachers use to offer differentiated learning preferences. Online and blended learning courses can also allow students to progress through the online content at a flexible pace, giving students sufficient time to grasp the content. (Means, Toyama, Murphy, & Baki, 2013).

Objectives

This study aims to investigate the effect of a program based on Differentiated Instruction on developing secondary stage students' writing fluency. The study underscores the influence of the newly coined Tomlinson's theory " Differentiated Instruction" on creating an upheaval and revolution in learning foreign languages. It also aims to compare the level of difference of intermediate stage students' writing fluency on the pre-test and post-test to determine the effectiveness of Differentiated Instruction in developing intermediate stage students in Al-Azhar Educational Institutes.

Accordingly, the following questions have been considered to explore the context of writing fluency of secondary stage students from a Differentiated perspective. Research questions are stated hereunder: The main question is: How can Al-Azhar Secondary Stage students' writing fluency be enhanced. Hence, there is a need to answer the following sub-questions.

1. What is the level of Al-Azhar secondary stage students' writing fluency before and after the intervention program?
2. What is the effect of differentiated instruction to develop students' writing fluency?
3. Is there a significant difference before and after the intervention program to develop students' writing fluency?

Hypothesis

There is no significant difference before and after the intervention program to develop students' writing fluency.

METHODS

The researcher adopted a quasi-experimental one-group design to test the hypotheses of the study. The researcher used a suggested program based on Differentiated Instruction (DI) with the group and administered a pre and post-test to identify its effect on students' ability to research writing fluency before and after studying the program.

Subjects of the study

The participants of the study were randomly selected from First-Year Secondary students of Al-Jalawea institute. The study group consisted of (32) Students, who represented the experiment group. The researcher chose the probability sampling technique which means that every member of the population has a chance of being selected. This technique is valid when the results are produced to represent the whole population. The population of the study was comprehensive to all intermediate stage students in Al-Azhar Institutes The researcher chose his simple random sample from Jalawea Institute for boys in Sohag governorate, Egypt. All of them are males as there is gender segregation in Al-Azhar Institutes. Their ages range from 15 to 17 years old. The participants were chosen purposively for studying the additional units of the program. The researcher taught the 12-unit DI-based program to this group of students who were randomly chosen from about (350) students in the Institute and were taught the program units in addition to their regular English syllabus.

Ethical consideration

The researcher explained very well to the participants their role in participating in the program and taking the test. After they verbally concurred, the informed consent form was given to each of the participants where they needed to affix their signature, signifying understanding of their consent to participation. The selection of the participants was based solely on the eligibility criteria and not on affinity or congeniality. After the test, the participants were given simple feedback. The researcher secured the personal information and data of the participants through password encryption in the digital space of the drive, and it will be deleted after two years.

Instrument

To carry out this study, the researcher, as a first step, implemented a suggested program, which he designed in compliance with the theory of Differentiated Instruction. The researcher designed the program in three units, of twelve lessons, with two or three activities. The researcher began with a placement test to stand on the level of class participants and classify them as well as choose the best activities. Each unit contained four main lessons based on the strategies delimited to the program, i.e. Visualization, Photo-Story, Mind Map, and YouTube Videos. The researcher varied the content as it is not the same in every lesson but one may give in one time a puzzle and another one a long article about a certain aspect of writing fluency, or jump to a WhatsApp or Facebook groups to listen for or write about a certain topic. The next lesson is giving a field trip organized previously by the teacher, students find themselves in a supermarket, factory, water station, another school, a natural resource, or a beautiful scene enriching them with vocabulary and getting them forward to master note-taking to write a home-work report about their wonderful trip. The program did not evade grammar, as it is an important element in writing fluently.

The content of this suggested program was selected with great awareness to help in training the students to improve their writing skills through the presented practice. The contents of any educational program are the substance of teaching and they consist of facts, concepts, skills, and attitudes. The suggested program consisted of three units and it covered twelve lessons. Each lesson lasted forty-five minutes. Lexis, as for Arabs and Egyptian syllabi, has no rules but is kept randomly. The researcher replaced this with Longman and Oxford certified 3000 common and frequent words to make students keep the words already used in everyday English. There are also in the program many extracurricular activities, hands-on learning, and games like the most important and inspiring Scavenger Hunt Game. The researcher did not also neglect homework at the end of every lesson and self-reflection of students according to the latest methods, as he used learning logs, learning journals, and KWL strategy to help students specify their aim and judge their learning besides utilizing peers. The program gave a brief hint of summarizing, clarity, lexis, and grammar to help students acquaint themselves with a theoretical basis of fluent writing. Although the program depended basically on print material and the usual classroom, it had a great deal of extracurricular and outdoor activities as well as using technology and social media that nearly all the students master to link them with learning English. The researcher included many useful websites, programs, PowerPoint slideshows, a photo-3 story program to help them create a story using photos and videos, and an x-mind map program to help students use mind mapping to generate ideas.

Before this, as a second step, a placement test was used to determine the students' ability to write fluently. It contained a text with some questions about mechanics, clarity, accuracy, punctuation, grammar, lexis, and organization of ideas. Students showed knowledge and were acquainted with some points like grammar and punctuation but some expressions were not familiar to them as accuracy, coherence, and clarity. This required using prior knowledge and scaffolding to revise and merge known expressions and easily understand new ones. In addition, the researcher designed lesson-based placement exercises to test exactly the aim of the lesson and choose the best strategy for each lesson.

Finally, a writing fluency test was applied before and after the administration of the program to measure the effects of using the program. The test had been used as a research instrument to investigate the effect of teaching writing fluency through using DI on developing students' writing fluency. The aim of the test was to check the

students' ability to carry out the following main paragraph writing fluency aspects: Organization (Topic sentence, supporting sentences, introductory sentences, concluding sentence, organization, order, and completeness), Accuracy (careful use of language and word choice to express meaning), Meaning Construction (deciphering and understanding the meaning behind the words), Clarity of Ideas (Ideas are legible, understandable, accessible, short and to the point), and Self-expression (Being able to express oneself freely, present one's own thoughts, beliefs, and ideas. After setting the test in its first version, it was examined by a jury panel of experts in EFL teaching Methods, and also by expert supervisors and EFL teachers for the same level to determine the statement of the tested items, clarity of instruction, suitability of test items, suitability of scoring techniques and any other comments or suggestions. The number of these experts was (9).

It was estimated that a period of 90 minutes would provide ample time for students to read the questions and instructions to complete the test. No one needed the extension of time to complete the test. The time was estimated in the following way: The total time is taken by all students (in minutes)/ the total number of students = $2800/32 = 90$ minutes. In this research, ordinal scales were used. An ordinal scale is a ranking or rating data that normally uses integers in ascending or descending order. The numbers given (0, 1, 2, 3, and 4) do not show that the interval between scales is equal, nor do they indicate absolute quantities. They are merely numerical labels. Based on a Likert scale. All test items were scored by two raters to consider subjectivity, especially those that were not MCQ or fill in the gap questions. The scoring rubric was given to the raters to ensure that they are on the right track. The total score was 100 marks and each question, out of five, deserves 20 marks, each sub-skill has four marks. The raters' scores for the students' writing were then analyzed separately for the five elements of meaning Construction, Organization, Clarity of Ideas, Accuracy, and Self-expression covered in Allen (2014), Ayhan & Turkyilmaz (2015).

The validity of the instrument

The researcher utilized researcher-made test/examination questions as an instrument of the study. It went through a series of rigorous content and validity of experts in test construction, instrumentation, and evaluation before it was administered to students in the scheduled examination. The instrument was validated by (9) nine experts, ranging from University professors to teachers of English and technology experts. The material was brought forward to multiple language experts and English teachers who provided their enlightenment on the Do's and Don'ts in test construction; the English Senior Teacher rigorously examined the correctness and accuracy of the concepts/contents; the English Regional Supervisor who further evaluated the questions in the test if it is aligned with the program syllabus; and finally, by the Dean of Faculty of Education and Chairman of Egyptian Professional Academy for Teachers who signified that the examination was found to be valid and approved to administer to the students.

Data collection

The researcher went through the following steps while conducting the research. First, he studied previous research related to Differentiated Instruction and considered the drawbacks of each research. Second, he conducted several meetings with experienced English language teachers and professors to discuss paragraph writing skills problems and difficulties. Third, he designed the suggested program based on the DI and a theoretical framework with sessions' plans that cover all the sessions implemented by the study. Fourth, he designed the written pre-test and post-test. Fifth, he presented the test to experts including, English experienced teachers, university specialists (professors and instructors), and EFL teachers' supervisors, and considered their recommendations, suggestions, and modifications to ensure the test's validity. Sixth, he applied the written pre-test and post-test to the experiment participants to evaluate the students' ability to write paragraphs fluently incorrect and academic way. Seventh, he taught students paragraph writing fluency using the suggested program based on DI and various activities as well as modern means of technology. The researcher asked students to write short paragraphs about some issues through games, WhatsApp and Facebook groups, field trips, web quests, and print materials in different places other than class side by side with the traditional classroom via group work, pair work, or individually as well as a whole class

to achieve the best use of the content and consider the individual differences among students. Finally, he analyzed the collected data after administering the pre-posttest to the participants of the experiment and displayed the results of the test, recommendations, and suggestions.

Data analysis

In achieving the objective of the study, which is to explore the effect of the suggested program based on Differentiated Instruction (DI) on developing students' writing fluency, thirty-two subjects were engaged in the study. The researchers opted to use a seven-step of data analysis. First, the test was delivered to the students, and special instructions were recited. Second, the tests were collected. Third, raters evaluated students' answers. Fourth, marks were analyzed by SPSS 19. Fifth, the results of the study were combined into a thorough description of the phenomenon under study. Sixth, the fundamental structure of the phenomenon was described. Lastly, the researcher returned to the participants for further information. Reliability and validation of the findings were done by giving the test scores and their interwoven relationships to the subjects to compare with their experiences. The overall data analysis was aided with SPSS 19 data analysis software.

In the process of the obtained data through test items in the examination for prelim, midterm, and final, the following descriptive inferential statistics were employed: Mean, one-sample two-tailed t-test to determine writing fluency development for Intermediate stage students in Al-Azhar Educational Institutes through studying a 12-unit program as an educational way in teaching Differentiated Instruction theory. Additively, Alpha Cronbach was calculated for the test and it was 0.87, a high value that generally indicates the accuracy and reliability of the test as a means of measurement and is therefore reliable. All computation in the gathered empirical statistical data was done using the computer process Statistical Package for the Social Sciences (SPSS 19).

RESULTS

Based on the constructed research questions and hypotheses, data were gathered according to the prescribed method, and students' marks were carefully analyzed. This section presents the analysis and interpretation of the data collected based on students' scores in the posttest. Table 1 indicates the effectiveness of a program based on DI theory on students' writing fluency. Furthermore, the discussion briefly explains the findings with references.

Table 1. t-test Results for the significance of differences between the mean scores of the participants' every skill (meaning construction, organization, clarity of ideas, accuracy, and self-expression) on the pre and post writing fluency test (N=32) and (DF= 31)

Skill	Mean		Std. Deviation		t-test	Sig.	Effect size (η^2)
	<i>pre</i>	<i>post</i>	<i>pre</i>	<i>post</i>			
Meaning construction	7.80	11.95	3.56	3.44	2.196	0.025	0.135 Medium
Organization	3.93	16.03	4.86	3.75	12.034	0.000	0.823 Very Large
Clarity of Ideas	3.40	14.09	3.84	3.29	7.707	0.000	0.657 Large

Accuracy	4.66	14.43	3.84	3.39	6.752	0.000	0.595 Large
Self-expression	3.81	14.37	3.84	3.48	7.071	0.000	0.617 Large

Table 1 shows that the significance level (sig) for the Meaning Construction sub-skill is greater than (0.01) and less than (0.05). This indicates that there is no statistically significant difference in this sub-skill at the 0.05 level between the mean scores of the study participants on the pre and post-administration of the writing fluency test in terms of (Meaning Construction). Conversely, the aforementioned table shows the significance level for other skills (Clarity of ideas, Organization, Self-expression, and Accuracy) is less than 0.01. This indicates that there is a statistically significant difference at the 0.01 level between the mean scores of the study participants on the pre and post-administration of the writing fluency test in terms of (Clarity of ideas, Organization, Self-expression, and Accuracy) in favor of the posttest. This means that the H01 should be accepted in terms of "Meaning Construction" and refused in other components. Consequently, the alternative hypothesis is to be accepted. So, it can be concluded that there is a statistically significant difference between the mean scores of the study participants on the pre and post-writing fluency test regarding the development of the (Clarity of ideas, Organization, Self-expression, and Accuracy) in favor of the post-administration mean scores.

Table 2. t-test Results for the significance of differences between the mean scores of the participants' 'overall writing fluency on the pre and post administration of the writing fluency test

Skill	Mean		Std. Deviation		T-test	Sig.	Effect size (η^2)
	<i>pre</i>	<i>post</i>	<i>pre</i>	<i>post</i>			
Over Writing Fluency	21.62	70.34	18.01	15.42	10.552	0.000	0.782

Table 2 shows that the significance level (sig) is less than (0.01). This indicates that there is a statistically significant difference at the 0.01 level between the mean scores of the study participants on the pre and post-administration of the writing fluency test in terms of the overall writing fluency skills in favor of the posttest administration. This means that the H02 should be refused. Consequently, the alternative hypothesis is to be accepted. Therefore, it can be concluded that there is a statistically significant difference between the mean scores of the study participants on the pre and post-administration of the writing fluency test regarding the development of 'overall writing fluency in favor of the posttest administration scores. Results of the statistical analysis show that there is a statistically significant difference between the mean scores of the study participants on the pre and post administration of the test in terms of the development of the participants' general "writing fluency" in favor of the mean scores of the posttest. This is presented through the second hypothesis and table 2. This demonstrates the very large effect of using DI on developing EFL Al-Azhar secondary stage writing fluency.

DISCUSSION

Teaching writing from a differentiated Instruction perspective might have significant advantages for the students. This is emphasized by, Tomlinson (2014, P.4) when she pointed out that "Differentiated classrooms embody common sense. The logical flow of thought in a differentiated classroom is that: a nurturing environment encourages learning. The Quality curriculum requires clear and compelling learning goals used in ways that engage students' minds and lead to understanding."

DI-based activities in the program may have helped the students to be more exposed to the English language and to use it to discuss real debatable issues in real contexts for factual purposes. The program comprised various activities and techniques according to the students' own pace and learning profile. Therefore, it allowed the researcher to devise flexible activities and form small or large groups, in addition to utilizing activities for low achievers and outstanding students, so that the former could learn easily and freely and the latter could learn rapidly and competitively. The difference between the students' mean scores of the pre and administration of writing fluency test was highly significant. This could be attributed to the nature of the DI-based tasks and activities that may have fostered the students' ability to write fluently and reasonably and express their points of view freely.

However, Meaning Construction should receive great attention as it is usually the most difficult component of writing fluency not only for students but also for any EFL learner. Therefore, teachers must deliver special training for students and give them more time to be able to comprehend this skill. More specifically, the results of this study could be consistent with the results of some closely related studies through which DI-Based instruction was utilized to recommend improving the writing fluency components. For example, Ernest et al. (2011) recommended the implementation of Differentiated Instruction theory as a data-based ceaseless process of using practices based on proof to fulfill the demands of all students in an inclusion classroom.

In conventional teaching, the teacher observed that students are very low achievers in writing questions. They always leave the writing questions untouched in the exam. Even though students are fully aware of English grammar, their writing lacked organization of ideas, clarity of sentences, and mechanics are not abided by. They always have blocks in their writing and can hardly complete two or three lines and cannot proceed further. It was inferred that this may be due to their syllabi shortage in providing appropriate solutions. However, the teacher should professionally perform the responsibility as they take allegiance to their profession to educate learners with their maximum capacity to cater to different learning strategies adaptable and accessible to diverse students with different learning profiles and paces.

CONCLUSION AND RECOMMENDATION

English as Foreign Language (EFL) secondary education students are given few opportunities to argue debatable issues reasonably, write clear ideas, adopt an error-free approach, and express their opinions freely in a writing form, utilizing DI strategies and various technological means. Therefore, the findings of the present study indicate that arguing via activating multiple ways of knowing should be implemented. Throughout the discussion of the results, it has become clear that the DI-based program may have a significant role in developing the students' writing fluency. This was reflected in the significant "t" value of the test as a whole and of each separate sub-skill in the test. All the values were highly significant.

The DI-based program was effective for many reasons. The positive effect of the suggested DI-based program on developing the writing fluency of Al-Azhar first-year secondary stage students was attributed to the program's addressing of the students' different bits of intelligence, learning profile, readiness, areas of interest, and learning style. As students learned differently, the researcher as a teacher could fully encourage meaningful and enjoyable learning as much as possible for all the participants involved.

Based on the results of the present study, the following recommendations are made. It is recommended that the EFL syllabus for Al-Azhar first-year secondary students should be developed to meet the requirements of writing skills, especially writing fluency skills. EFL classes need to devote more time to the writing class to allow students to follow different writing styles that are appropriate to their different kinds of bits of intelligence. EFL students should be trained to work in environments that are suitable and appealing to them, and in a class where both homogeneous heterogeneous groups simultaneously are existent. The teacher should be trained on how to know the learning styles, bits of intelligence, and interests of their students, differentiate content, teaching strategies, evaluation techniques, and learning environments, use modern technology and make use of the Differentiated Instruction activities to deliver a good education and encourage students to take a step forward.

DI-based teaching should be incorporated into teaching writing in different educational stages so as to enhance students' abilities in writing fluency and teachers of EFL should be aware of the importance of enhancing the student-centered learning contexts. Therefore, the role of the EFL teacher should be changed from being a dominant figure in the classroom to being a facilitator, advisor, consultant, guide, and organizer. Teachers are attributed to care for students' individual differences by diversifying their teaching techniques in such a way that involves the different bits of intelligence that the students possess. Curriculum planners and designers are highly recommended to integrate DI activities not only in teaching writing but in EFL teaching in general. Lessons should be vivid, lively, well-designed, varied, and address all learning styles and interests. Mobile learning techniques such as Facebook, WhatsApp, and computer-based activities must be merged into lessons. It is prudent that assessment has to be varied and not only a paper one. Students may be assessed electronically via a computer or the internet. Oral Evaluation and interviews may be other means of evaluation. It is advisable that educational games, field trips, videos, PowerPoint, and hands-on practice should be considered and implemented in EFL syllabi.

REFERENCES

- Anggraeni, S.N. (2012). Optimizing the Use of Youtube Video to Improve Students' Competence in Writing Procedure Text (A Classroom Action Research at the Tenth Grade Students of SMA N Kebakkramat in Academic Year of 2011/2012). Sebelas Maret University.
- Ayhan, U. & Turkyilmaz, U. (2015). Key of Language Assessment: Rubrics and Rubric Design. *International Journal of Language and Linguistics Vol. 2* (No. 2), pp 82-92.
- Bukhari, S. (2016). Mind Mapping Techniques to Enhance EFL Writing Skill. *International Journal of Linguistics and Communication. Vol. 4*, No. 1, pp. 58-77. <https://doi.org/10.15640/ijlc.v4n1a7>
- Coubergs, C., Struyven, K., Vanthournout, G. & Engels, N. (2017). Measuring teachers' perceptions about differentiated instruction: The DI-Quest instrument and model. *Studies in Educational Evaluation*, 53, 41-54. <https://doi.org/10.1016/j.stueduc.2017.02.004>
- Crescente, M.L. & Lee, D. (2011). Critical issues of m-learning: design models, adoption processes, and future trends. *Journal of the Chinese Institute of Industrial Engineers*, 28(2), 111-123. <https://doi.org/10.1080/10170669.2010.548856>
- Dela Fuente, J.A. (2021). Facebook Messenger as an educational platform to scaffold deaf students' conceptual understanding in environmental science subject: A single group quasi-experimental study. *International Journal of Education*, 14(1), 19-29. doi: 10.17509/ije.v14i1.31386
- Deliana, Panah, I. & Manshor, R. (2021). English Collocations Improvement through Google Scholar. *TESOL International Journal, Volume 16* (6.2), 92- 108. <https://www.tesol-international-journal.com/volume-15-issue-6-2020/>
- Desokey, H.F.A. (2021). Psychological motives underlying selfie behavior among Egyptian college students. *International Research Journal of Science, Technology, Education, and Management*, 1(1), 35-43. <https://doi.org/10.5281/zenodo.5195632>
- Fairclough, N. (1989). *Language and Power*. Longman.
- Getachew, A. (2014). The Effect of Process Writing Approach on Grade 10 Learners' Writing Skill. The Case of Mentawuha Secondary School, Mentawuha Town, Awi Zone, Amhara Region. [MA Thesis. Haramaya University]. <https://files.eric.ed.gov/fulltext/EJ1034097.pdf>
- Hillar, S. (2012). *Mind Mapping with FreeMind*. Packt. Publishing Ltd.
- Janovsky, A. (2021). Teaching Strategies for Reading & Writing Fluency. [Video file]. Retrieved 05 Jul 2019 from <https://study.com/academy/lesson/teaching-strategies-for-reading-writingfluency.html>
- Klimova, B. (2013). The Importance of Writing. *Paripex - Indian Journal of Research*. 2. 9-11. <https://doi.org/10.15373/22501991/JAN2013/4>.
- Kok, B. (2012). The Influence of Differentiated Geometry Education on Gifted Students' creativity, spatial ability, and academic achievement. [Dissertation, Istanbul University.]
- Kuo, M.M. & Lai, C.C. (2006). Linguistics across Cultures: The Impact of Culture on Second Language Learning, *Journal of Foreign Language Instruction*, vol. 1 (1). Pp. 1-10.

- Makarova, E.A. & Varaksa, A.M. (2017). Education process visualization in metacognition development and sustainability. *International Journal of Cognitive Research in Science, Engineering and Education*.5(2):, 65-74. <https://doi.org/10.5937/IJCRSEE1702065A>
- McCarthy, J. (2014). 3 ways to plan for diverse learners: What teachers do. *Edutopia*. <http://www.edutopia.org/blog/differentiated-instruction-ways-to-plan-john-McCarthy>
- Means, B., Toyama, Y., Murphy, R., Bakia, M. & Jones, K. (2009). Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies. Washington, DC: U.S. Department of Education, Office of Planning, Evaluation, and Policy Development. <http://eric.ed.gov/?id=ED505824>
- Oddone, C. (2011). Using Videos from YouTube and Websites in the CLIL Classroom. *Studies about Languages*, 18. <https://doi.org/10.5755/j01.sal.0.18.417>
- Paradis, M. (2009). Declarative and procedural determinants of second language. John Benjamins Publishing Company. <http://dx.doi.org/10.1075/sibil.40>.
- Pratiwi, A. (2011). Optimizing the Use of Youtube Video to Improve Students' Writing Skill (A Classroom Action Research at the Second Grade of SMP Negeri 1 Juwirang Klaten in the academic Year of 2009/2010)No Title. Sebelas Maret University. <https://eprints.uns.ac.id/5518/1/207250811201108501.pdf>
- Rajput, S.N. & Shah, S.H.R. (2021). Computer-assisted English language learning technology for undergraduate university students. *International Research Journal of Science, Technology, Education and Management*, 1(1), 57-66. <https://doi.org/10.5281/zenodo.5201634>
- Reese, S. (2011). Differentiation in the language classroom. *The Language Educator*. 40-46. September 14, 2015, <https://www.scribd.com/doc/264618494/differentiation-in-the-language-classroom>
- Rennie, F., (2012). E-Learning and Social Networking Handbook, Routledge.
- Riswanto, Pebri Prandika Putra. (2012). "The Use of Mind Mapping Strategy in the Teaching of Writing at SMAN 3 Bengkulu, Indonesia". *International Journal of Humanities and Social Science*. Vol. 2, No. 21. http://www.ijhssnet.com/journals/Vol_2_No_21_November_2012/8.pdf
- Scrivener, Jim. (2011). Learning teaching: the essential guide to English language teaching. 3rd ed. Macmillan Books for Teachers.
- Serrato, M. (2016). 'Watch-Think-Write' and Other Proven Strategies for Using Video in the Classroom. *KQED*. <https://ww2.kqed.org/education/2016/08/23/watch-think-write-and-other-proven-strategies-for-using-video-in-the-classroom/>
- Tolesa, E. (2014). An Assessment of the Teaching of Writing Skills in the Context of the Current English Language Teaching Textbook: The Case of Two Secondary Schools in South West Shewa Zone. MA Thesis. Haramaya University. <https://docplayer.net/56866094-M-a-thesis-eshetu-tolesa-june-2014-haramaya-university.html>
- Tomlinson, C. A. & Imbeau, M.B. (2010). *Leading and managing a differentiated classroom*. Alexandria, VA: ASCD. <https://doi.org/10.1007/s12115-015-9888-0>
- Tomlinson, C. A. (2010). One kid at a time. *Educational Leadership*, 67(5), 12–17.
- Vygotsky, L. (1978). *Mind and society: The development of higher mental processes*. Harvard University Press.