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**The Integration of Automated Writing Evaluation Technology
to Enhance Students' Writing Skills: The Case of Second Year
English as a Foreign Language Students of Setif 2 University**

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English Language

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Dedication

This work is dedicated to those who believed in me, even when I struggled to believe in myself.

To my mother, Souad ZERARGA, whose unwavering support, encouragement, and love sustained me throughout my PhD journey.

To my father, Salim BOUABDALLAH, and my brother, Seif Eddine BOUABDALLAH, who accompanied me on the longest journeys from Sétif to Chlef. Without them, I would not have come this far.

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Abstract

The current study scrutinized the effectiveness of integrating Automated Writing Evaluation (AWE) technology in developing the writing skills of second-year students of English at Mohamed Lamine Debaghine Sétif 2 University. After interviewing seven teachers of written expression and administering a preliminary questionnaire to 25 students, the findings confirmed that learners indeed face challenges in grammar, vocabulary, mechanics, and overall writing organization. Most students reported receiving little feedback and struggling with self-correction, while teachers noted that providing corrective feedback was time-consuming. Consequently, the integration of AWE technology, specifically the Virtual Writing Tutor tool, was suggested as a remedy. Its effectiveness was investigated through a quasi-experimental pretest/posttest non-equivalent group design, using a mixed-methods approach as a methodological framework to guide the current investigation. Two intact groups, an experimental group (N=37) and a control group (N=37), were selected, and their performance in both pretest and posttest was analyzed across five writing subcomponents: content, organization, grammar, vocabulary, and mechanics. After receiving the treatment of using AWE for 14 weeks, the experimental group outperformed the control group in the posttest. With a statistical outcome derived from the independent samples t-test, a significant difference of $p < 0.05$ was indicated across several subcomponents, especially grammar, mechanics, and vocabulary. These results prove the positive effects of AWE integration on the participants' writing performance. In addition, the post-experimental questionnaire and interviews demonstrated the learners' positive perceptions towards using the tool in the classroom, highlighting increased motivation, autonomy, and willingness to continue using AWE in the future. Therefore, EFL teachers are recommended to incorporate Automated Writing Evaluation technology into the classroom to enhance the teaching and learning of writing.

Keywords: Automated Writing Evaluation (AWE), Virtual Writing Tutor, EFL students, writing skills, feedback

Table of Content

General Introduction

1.	Background and Significance of the Research	1
2.	Problem Statement	2
3.	Aim of the Study	2
4.	Research Methodology	3
4.1	Research Design	3
4.2	Research Questions and Hypotheses	3
4.2.1	Research Questions	3
4.2.2	Research Hypotheses	3
4.3	Case Study	4
4.4	Research Local	4
4.5	Sample and sampling techniques	4
4.6	Population	4
4.7	Experiment	4
4.8	Data Collection Tools:	5
4.8.1	Placement Test (Pearson, 2006):	5
4.8.2	Experiment Pre-Test(s), Progress Test, Post-Test:	6
4.8.3	Experiment Tests Evaluation:	7
4.8.4	Post Experiment Satisfaction Scale(s):	7
4.9	Ethical Issues and Considerations	8
4.10	Data Analysis Plan	8
4.10.1	Data Analysis Software	8
4.11	Anticipated Limitations	8
5.	Key Vocabulary	9
5.1	Machine learning technology	9
5.2	Automated writing evaluation	9
6.	Organisation of the Dissertation	9
	Chapter One:Literature Review	12
	Introduction	12
1.1	Definitions of writing skill	12

1.2	Nature of Writing skill:	13
1.3	Characteristics of writing skill	14
1.3.1	Permanence and transcending time and space:	14
1.3.2	Participants and distance:	14
1.3.3	Process time:	15
1.3.4	Signs and symbols:	15
1.3.5	Organisation and language:	16
1.4	Importance of writing:	17
1.5	Approaches of teaching writing:	18
1.5.1	Text-oriented approach:	19
1.5.2	Writer-Oriented approach:	19
1.5.3	The Writing Process	21
1.5.4	Reader oriented approach:	26
1.6	Paragraph structure	28
1.7	Components of Writing Skill	28
1.7.1	Content	29
1.7.2	Organization	30
1.7.3	Language Use	30
1.7.4	Vocabulary:	31
1.7.5	Mechanics	31
1.8	Rhetorical Patterns of Paragraphs	32
1.8.1	Descriptive paragraph	33
1.8.2	Cause and effect paragraph	33
1.8.3	Argumentative paragraph	34
1.8.4	Compare and contrast paragraph	35
1.8.5	Narrative Paragraph	35
1.9	Definition and Nature of Error	36
1.10	Types of Errors	36
1.11	Sources of Errors	37
1.11.1	First Language Transfer (Interlingual Interference)	37
1.11.2	Intralingual Interference	38
1.11.3	Instructional Factors	38

1.11.4	Sociolinguistic and Contextual Factors	39
1.12	Common Errors Affecting Students' Writing Skill	39
1.12.1	Substance Errors	39
1.12.2	Spelling Errors	40
1.12.3	Capitalization Errors	40
1.12.4	Punctuation Errors	41
1.12.5	Textual Errors	41
1.12.6	Lexical Errors	41
1.12.7	Grammatical Errors	42
1.13	Feedback in Writing Skill	42
1.14	The Role of Feedback in Writing	43
1.15	Approaches of Corrective Feedback	45
1.15.1	Direct vs Indirect Feedback	45
1.15.2	Focused vs Unfocused Feedback:	45
1.16	Modes of Feedback Provision	46
1.16.1	Teacher feedback	46
1.16.2	Peer Feedback	47
1.16.3	Automated Feedback	48
1.17	Technology Integration	49
1.18	Technology And Writing Skill	50
1.19	Using Artificial Intelligence in Writing	51
1.20	Generative AI in Writing Instruction	52
1.21	Definition of Automated Writing Evaluation Tools	54
1.22	History of Automated Writing Evaluation Tools	54
1.23	Previous Studies on Automated Writing Evaluation Tools	56
1.24	Rational for Conducting the Study	61
Conclusion		
 Chapter two: Research Methodology		 65
Introduction		65
2.1	Research Questions and Hypotheses	65
2.1.1	Research Questions	65

2.1.2	Research Hypotheses	66
2.2	Research Paradigm	66
2.2.1	Beliefs Shaping Research Paradigms:	67
2.2.2	Types of Paradigms:	69
2.2.3	Paradigm selected for the study	71
2.3	Research Approach	72
2.3.1	Quantitative approach	72
2.3.2	Qualitative approach	72
2.3.3	Mixed methods approach	73
2.3.4	Approach selected for the study	74
2.4	Research design	75
2.4.1	Mixed methods experimental design	76
2.4.2	Experimental Design	77
2.5	Research Population and Sampling	80
2.5.1	Research population	81
2.5.2	Participants:	81
2.5.3	Sampling	83
2.5.4	Study context:	86
2.5.5	Students Learning Profile:	88
2.6	Data Collection Phases and Research Instrumentation:	90
2.6.1	Exploratory Phase and Research Instrumentation:	90
2.6.2	Pre- Experimental phase and Research Instrumentation:	93
2.6.3	Experimental Phase and Research Instrumentation:	94
2.6.4	Post-Experimental phase and Research Instrumentation:	107
2.7	Administration of the instruments:	116
2.7.1	Students' preliminary questionnaire:	116
2.7.2	Teachers' preliminary questionnaire:	116
2.7.3	Placement test:	117
2.7.4	Pre-test:	117
2.7.5	Progress test:	118
2.7.6	Post test:	118
2.7.7	Post treatment questionnaire:	119

2.7.8	Post treatment interview:	119
2.8	The experiment	120
2.8.1	Virtual Writing Tutor Choice Rational:	120
2.8.2	The implementation of the treatment:	123
2.8.3	Structure of the treatment:	124
2.9	Data Analysis procedures:	126
2.9.1	Analysis of Quantitative Data	127
2.9.2	Analysis of Qualitative Data:	129
2.9.3	Analysis of Paragraph Corpus:	130
2.10	Ethical considerations:	130
2.11	Limitations of the study	131
2.12	Delimitations of the Study	131
Conclusion		
Chapter Three: Data Analysis and Interpretation		134
Introduction		134
3.1	Analysis of Exploratory phase	134
3.1.1	Analysis of teachers' interview:	134
3.1.2	Analysis Students pre-questionnaire:	138
3.1.3	Verifying the homogeneity of both groups	143
3.2	Analysis of Experimental Phase:	152
3.2.1	Verifying the efficacy of the treatment comparing post test results of both group	152
3.2.2	Performance of the experimental group in the Quazi experimental phase:	154
3.2.3	Performance of the Control Group in the Quazi Experimental Phase:	161
3.2.4	Verifying Improvement in Writing Skill Components	168
3.2.5	Evidence of Improvement from Students Corpus Paragraphs	175
3.2.6	Development in content	187
3.3	Analysis of post-experimental phase	190
3.3.1	Questionnaire analysis:	190
3.3.2	Analysis of Student's Interview:	201
Conclusion		

Chapter four: Discussion, Recommendations, Limitations, and Suggestions for Future Research	212
Introduction	212
4.1 Discussion of the Findings	212
4.1.1 Discussion of the Research Question 1	213
4.1.2 Discussion of the Research Question 2	220
4.1.3 Discussion of the Research Question 3	224
4.2 Summary of the Main Findings	228
4.3 Recommendations	228
4.4 Limitations of the Study:	230
4.5 Suggestions for Future Research	231
4.5.1 Broaden Participant Demographics	231
4.5.2 Increase Intervention Time	232
4.5.3 Multiple AWE Tools Comparison	232
4.5.4 Integrate Peer Feedback	233
4.5.5 Focus on Affective Factors:	233
4.5.6 Impact of Automated Writing Evaluation on a Specific Achievement Level	234
General conclusion	
References	
Appendices	
Résumé	
ملخص	

List of Tables

Table 2.1 Background information of the sample	81
Table 2.2 Common European Framework of Reference for Languages Levels.....	94
Table 2.3 Time span of the treatment phase	126
Table 3.1 Descriptive analysis of students' preliminary questionnaire	139
Table 3.2 English Levels According to Placement Test.....	143
Table 3.3 Placement Test Descriptive Statistics for CG and EG.....	144
Table 3.4 Frequency and Percentage Distribution of Placement Test Results for CG and EG	144
Table 3.5 Chi-Square Test Results for Comparing CG and EG on Placement Test Performance.	144
Table 3.6 Descriptive Statistics of Control Group and Experimental Groups' Scores in Pre test.	145
Table 3.7 Independent T-Test of Pre-Tests for the CG and the EG	146
Table 3.8 Independent sample test group statistics of content scores for the Pre test	147
Table 3.9 Independent T-Test of Content Scores in the Pre-Test for the CG and EG.....	147
Table 3.10 Independent sample test group statistics of Organisation scores for the Pre test	148
Table 3.11 Independent T-Test of Organisation Scores in the Pre-Test for the CG and EG.....	148
Table 3.12 Independent sample test group statistics of Grammar scores for the Pre test.....	149
Table 3.13 Independent T-Test of Grammar Scores in the Pre-Test for the CG and EG Groups	149
Table 3.14 Independent sample test group statistics of vocabulary scores for the Pre test	150
Table 3.15 Independent T-Test of vocabulary Scores in the Pre-Test for the CG and EG Groups.....	150
Table 3.16 Independent sample test group statistics of Mechanics scores for the Pre test.....	151
Table 3.17 Independent T-Test of Mechanics Scores in the Pre-Test for the CG and EG Groups	152
Table 3.18 Descriptive statistics of the Post-test scores for group and experimental group	153
Table 3.19 Independent T-Test of Post-Tests for the Control and the Experimental Groups	153

Table 3.20 Descriptive statistics on the Performance of the EG on the Pre-test and the Post-test	154
Table 3.21 Paired Samples T-Test of the Performance of the EG on Pre-test and the Post-test	154
Table 3.22 Descriptive Statistics of Experimental Group Scores in Pre, Progress, and Post tests	155
Table 3.23 Repeated Measures ANOVA: Tests of Within-Subjects Effects (Greenhouse–Geisser Corrected)	155
Table 3.24 Repeated Measures ANOVA: Tests of Within-Subjects Contrasts	156
Table 3.25 Descriptive statistics on the Performance of the EG in CG on the Pre-test Post-test..	157
Table 3.26 Paired Samples T-Test of the Performance of the EG in CG on the Pre-test Post-test	157
Table 3.27 Descriptive statistics on the Performance of the EG in Organisation on the Pre-test and the Post-test.....	158
Table 3.28 Paired Samples T-Test of the Performance of the EG in Organisation Pre-test and the Post-test.....	158
Table 3.29 Descriptive statistics on the Performance of EG in Grammar on Pre-test Post-test....	159
Table 3.30 Paired Samples T-Test of the Performance of the EG in Grammar on the Pre-test and the Post-test.....	159
Table 3.31 Descriptive statistics on the Performance of the Experimental Group in Vocabulary on the Pre-test and the Post-test	160
Table 3.32 Paired Samples T-Test of the Performance of the Experimental Group in Vocabulary on the Pre-test and the Post-test	160
Table 3.33 Descriptive statistics on the Performance of the Experimental Group in Mechanics on the Pre-test and the Post-test.....	161
Table 3.34 Paired Samples T-Test of the Performance of the Experimental Group in Mechanics on the Pre-test and the Post-test	161

Table 3.35 Descriptive statistics on the Performance of the Control Group on the Pre-test and the Post-test.....	162
Table 3.36 Paired Samples T-Test of the Performance of the Control Group on the Pre-test and the Post-test.....	162
Table 3.37 Descriptive statistics on the Performance of the CG in Content on the Pre-test and the Post-test.....	163
Table 3.38 Paired Samples T-Test of the Performance of the CG in Content on the Pre-test and the Post-test.....	163
Table 3.39 Descriptive statistics on the Performance of the CG in Organisation on the Pre-test and the Post-test.....	164
Table 3.40 Paired Samples T-Test of the Performance of the C G in Organisation on the Pre-test and the Post-test.....	164
Table 3.41 Descriptive statistics on the Performance of the CG in Grammar on the Pre-test and the Post-test.....	165
Table 3.42 Paired Samples T-Test of the Performance of the CG in Grammar on the Pre-test and the Post-test.....	165
Table 3.43 Descriptive statistics on the Performance of the CG in Vocabulary on the Pre-test and the Post-test.....	166
Table 3.44 Paired Samples T-Test of the Performance of the CG in Vocabulary on the Pre-test and the Post-test.....	166
Table 3.45 Descriptive statistics on the Performance of the CG in Mechanics on the Pre-test and the Post-test.....	167

Table 3.46 Paired Samples T-Test of the Performance of the CG in Mechanics on the Pre-test and the Post-test.....	167
Table 3.47 Descriptive statistics of the content scores in Post-test scours for CG and EG.....	169
Table 3.48 Independent T-Test of Content Scores in the Post-Test for the CG and EG.....	169
Table 3.49 Descriptive statistics of the Organization scores in Post-test scours for CG and EG..	170
Table 3.50 Independent T-Test of Organisation Scores in the Post-Test for CG and EG.....	170
Table 3.51 Descriptive statistics of the Grammar scores in Post-test scours for CG and EG	171
Table 3.52 Independent T-Test of Grammar Scores in the Post-Test for CG and EG	172
Table 3.53 Descriptive statistics of the vocabulary scores in Post-test scours for CG and EG.....	173
Table 3.54 Independent T-Test of vocabulary Scores in the Post-Test for the CG and EG.....	173
Table 3.55 Descriptive statistics of the Mechanics scores in Post-test scores for CG and EG	174
Table 3.56 Independent T-Test of Mechanics Scores in the Post-Test for CG and EG	174
Table 3.57 Disceptie saisics of Percieved trust.....	190
Table 3.58 Descriptive statistics o Perceived Ease of Use	192
Table 3.59 Descriptive statistics of Autonomy.....	194
Table 3.60 Descriptive statistics of Perceived Usefulness.....	195
Table 3.61 Descriptive statistics of Motivation.....	197
Table 3.62 Descriptive Statistics of Behavioral Intention for Future Use.....	199
Table 3.63 Descriptive statistics of Facilitating Conditions	200

List of Figures

Figure 2.1 Types of paradigms and their related beliefs.....	70
Figure 2.2 Mixed methods experimental design.....	77
Figure 3.1 Sample student paragraph from pre-test illustrating organizational issues.....	183
Figure 3.2 Sample student paragraph from post-test illustrating organizational issues.....	185
Figure 3.3 Sample student paragraph from pre-test illustrating content issues.....	187
Figure 3.4 Sample student paragraph from post-test illustrating content issues.....	189

List of Abbreviations

- **AI** – Artificial Intelligence
- **AWE** – Automated Writing Evaluation
- **CEFR** – Common European Framework of Reference for Languages
- **CF**– Corrective Feedback
- **CG** – Control Group
- **EFL** – English as a Foreign Language
- **EG** – Experiment Group
- **ELT** – English Language Teaching
- **ESL** – English as a Second Language
- **ICT** – Information and Communication Technology
- **L1** – First Language / Native Language
- **L2** – Second Language
- **M** – Mean
- **NLP**– Natural Language Processing
- **RQ** – Research Question
- **SD** – Standard Deviation
- **SPSS** – Statistical Package for the Social Sciences
- **TELL** – Technology-Enhanced Language Learning
- **VWT**– Virtual Writing Tutor
- **WCF** – Written Corrective Feedback
- **WE** – Written Expression

General Introduction

1.	Background and Significance of the Research	1
2.	Problem Statement	2
3.	Aim of the Study	2
4.	Research Methodology	3
4.1	Research Design	3
4.2	Research Questions and Hypotheses	3
4.2.1	Research Questions	3
4.2.2	Research Hypotheses	3
4.3	Case Study	4
4.4	Research Local	4
4.5	Sample and sampling techniques	4
4.6	Population	4
4.7	Experiment	
4.8	Data Collection Tools:	5
4.8.1	Placement Test (Pearson, 2006):	5
4.8.2	Experiment Pre-Test(s), Progress Test, Post-Test:	6
4.8.3	Experiment Tests Evaluation:	7
4.8.4	Post Experiment Satisfaction Scale(s):	7
4.9	Ethical Issues and Considerations	8
4.10	Data Analysis Plan	8
4.10.1	Data Analysis Software	8
4.11	Anticipated Limitations	8
5.	Key Vocabulary	9
5.1	Machine learning technology	9
5.2	Automated writing evaluation	9
6.	Organization of the Dissertation	9

General introduction

1 Background and Significance of the Research

Finding tools that help increase the learning outcomes was the main concern of teachers throughout the history of education. For almost a millennium, tutors relied heavily on blackboards, abacus, writing slates, and books since these were the only available materials. However, with the widespread of technology and the invention of microcomputer and personal computers in the 1970s, a new phase for educational technology began. During the unprecedented time of the pandemic of covid-19, the use of technology has become paramount as it helped teachers connect with their students and deliver their lessons during lockdown time. It was indeed proved that the use of technology has several benefits which impelled teachers to utilize ICTs inside the classroom (Benty et al., 2020). In other words, educators are encouraged to combine both synchronous and asynchronous learning and use the best of online and face-to-face learning as a blended learning approach for the post-pandemic world (Singh et al., 2021). This inspired pedagogues to move even further to exploit the recent findings and developed ways of teaching using machine learning tools to help students overcome their problems in learning. Software and Websites were designed to help not only students but also teachers in managing their time and improving the learning process.

There exist various problems in education and writing skill is no exception. It is indeed a very important skill. Chappell, (2011, as cited in Klimova, 2012), stated several advantages to writing namely improving thinking skills, developing communication, and making logical and persuasive arguments to prepare for school or employment as it is extensively needed in higher education and workplace. However, this skill is considered challenging and students are viewed to be struggling with composing an effective piece of writing. Therefore, machine learning tools,

mainly Automated Writing Evaluation (AWE), were thought to be integrated inside classroom instruction as a remedy to enhance students' writing skills.

2. Problem Statement

The English language has paved its way in becoming a lingua franca that is now used in almost all aspects of life. Speaking as well as writing are highly demanded skills in education. Writing is highly needed since research, emails, reports, and academic articles are demanded to be posted in English; therefore, improving writing skills is pivotal and unprecedented. However, it is viewed that students struggle with such skills despite spending a long period of time studying English. Students struggle with grammar, correct choice of words, and organization of ideas. Unlike speaking, writing has to be organized and less spontaneous which many students often struggle with. Due to time constraints and large classes size, teachers do not have time to provide feedback to all students concerning their writing, Thus, more innovative ways of teaching are needed to overcome such issue. The use of AWE with second-year students of English at Mohamed Lamine Debaghine Setif 2 University is a potential solution to their writing problems. This might help students be more autonomous and rely less on their teachers since the goal of the university is preparing students for real-life situations rather than seeking marks. This type of technology might help students be self-reliant and more active in improving their writing, especially in the process of proofreading and drafting.

3. Aim of Study

This study aims at investigating the effectiveness of machine learning technology on the writing skills of students. More precisely: the effectiveness of Automated Writing Evaluation on students' writing skills and exploring the students' perceptions towards including such treatment.

4. Research Methodology

4.1. Research Design

This study is a mixed-method in nature; the research design is chosen to test the effectiveness of Automated Writing Evaluation (AWE) technology on students' writing skills and know their perceptions of the treatment. The quantitative method is used for data collection of quantitative research. The qualitative method is used to collect qualitative data to know the perceptions of the participants.

4.2. Research Questions and Hypotheses

4.2.1. Research Questions

RQ1. What are the effects Automated Writing Evaluation (AWE) technology on Mohammad Lamine Debaghine second-year EFL students' writing skills?

RQ2. Which writing aspect (s) has more developed after the integration of Automated Writing Evaluation technology?

RQ3. What are the perceptions of Mohammad Lamine Debaghine second-year EFL students towards integrating Automated Writing Evaluation technology to improve writing skills.?

4.2.2. Research Hypotheses

4.2.2.1. Null Hypothesis.

Second-year students of Mohamed Lamine Debaghine University who receive exposure to Automated Writing Evaluation technology will not significantly develop better writing skills than students who do not receive such exposure to any machine learning technology.

4.2.2.2 Alternate Hypothesis.

Second-year students of Mohamed Lamine Debaghine University who receive exposure to Automated Writing Evaluation technology will significantly develop better writing skills than students who do not receive such exposure to any machine learning technology.

4.3. Case Study

Case of Second-year students of English at Mohamed Lamine Debaghine Setif 2 University.

4.4. Research Local

The study's investigation is located in the English department of Mohammed Lamine Debaghine Setif 2 university

4.5. Sample and sampling techniques

A sample of 74 students is chosen for better manipulation of the groups due to the large number of second-year students. This study opted for a non-probability sampling design in which participants are conveniently selected based on their availability since they are usually pre-assigned by the administration. The choice for assigning one of the groups to be either the experimental group or the control group is random. The first to be selected is considered the experimental group while the remaining one is the control group.

4.6. Population

The research population is the Second-year students at Mohammed Lamine Debaghine University.

4.7. Experiment

A pre-test is submitted to both experimental and control groups. 14 weeks of treatment is administered to the experimental group with one session per week to confirm the effectiveness of the treatment. The same syllabus designed by the university is taught for both groups. However, students of the experimental group are asked to use the selected machine learning tool for the treatment in order to test the effectiveness Automated Writing Evaluation technology. Then, a post-test that resembles the pre-test is administered to both groups to see if there are any significant changes. Also, a questionnaire and an interview are submitted to the experimental group to know their assumptions about integrating the Automated Writing Evaluation inside the classroom.

4.8. Data Collection Tools

To answer the research questions, several research tools, both qualitative and quantitative, are used. First, after a thorough research of the problem in the literature and as an attempt to prove the problem exists in the chosen sample, two preliminary tools are used, including an interview with teachers and a questionnaire conducted with students. These tools investigate the students' level in writing and identify the allocated time devoted to practicing writing and providing feedback to students. Furthermore, to ensure the homogeneity of the research sample, a placement test is given to both experimental and control groups. Additionally, to observe any significant differences in the sample, both the control group and experimental group are delivered with a pre-test and a post-test. Finally, after the treatment, students' views concerning the suggested remedy, a post experiment satisfaction scale and a post treatment interview are solely administered to the experimental group.

4.8.2. Placement Test (Pearson, 2006)

Both experimental and control groups undertook the placement test (Pearson education, 2006) with its two versions (A and B) and an answer sheet (cf. Appendix F). Each test contains 100 items with four options for each question. Then, the participants were informed about the aim of this test, which is to discern the participants' overall linguistic competence. Students were given 30 minutes to answer one of the versions. The researcher herself observed the students when taking the test in order to confirm the reliability of the test and prevent any cheating attempts. In order to facilitate and accelerate the correction, a test correction grid was utilized. Also, the scores obtained were restricted to the common European framework of reference for languages levels as follows:

4.8.3. Experiment Pre-Test(s), Progress Test, Post-Test

According to Perlman (2003) a performance assessment entails students to generate their own response based on a task, then his or her response will be assessed by a scoring rubric or a scoring criterion. Therefore, a writing performance task is different from a multiple-choice question in which a student chooses the correct response from a set of items; rather, the student will indeed demonstrate a piece of writing. Based upon these premises, a writing task is given to second-year students to generate their writing in which it is assessed by the chosen rubric. The pre test is designed to be different from progress test and post test in terms of content to avoid the extraneous variable of history. This procedure aims to avoid the probability of students developing their writing skill due to remembering the pretest tasks rather than to the actual treatment. The progress test is used in order to prove and ensure that a progress is being detected.

4.8.4. Experiment Tests Evaluation

The wiring rubric is adapted from Jacob et al.'s (1981) scoring profile (as cited in Hughes, 2003; Weigle, 2002); Ardiyanto (2021) and Brown and Lee (2015)(cf. Appendix R). The chosen rubric is analytic rubric which assesses organization, development of ideas, sentence structure, word choice, and mechanics. It rates several writing aspects individually rather than providing a single score unlike holistic rubrics. The latter requires one reading from the rater to decide upon the overall score; whereas, the analytic rubric entails several readings to score each writing criteria and eventually construct the final mark (Weigle, 2002). Therefore, analytic rubrics, as Wiseman (2012) stated, yield more specific analysis and are better suited for placement and diagnostic purposes which is the aim of this study. The chosen rubric has a scale from (score of 1) to (score of 4) for each aspect. The score results of each aspect were added to the other counterparts to generate the whole score. Hence, the ultimate score that a writing paper of these tests were 20. The rubric was chosen by following the guidelines of Perlman (2003) of selecting a scoring rubric. It relates to the outcomes being measured, covers the important dimensions of student performance, and it is useful, feasible, manageable, and practical. Also, there exists a clear basis for assigning scores at each scale point.

4.8.5. Post Experiment Satisfaction Scale(s)

The questionnaire is adapted from Zhai and Ma (2021), Wilson and Czik (2016), Ariyanto et al (2021), Wang et al. (2012), and Parra and Calero (2019). It is constructed of a five-point Likert scale, ranging from "strongly disagree" to "strongly agree. This questionnaire encompasses 25 items which are further categorized into distinct subsections, namely: perceived trust, perceived ease of use, autonomy, perceived usefulness, motivation, behavioral intention to use, and facilitating conditions. (cf. Appendix P)

4.9. Ethical Issues and Considerations

To maintain ethical consideration, the participants' permission was demanded in order not to impose anything against their will. Also, the participants' names and data collected from them were held private; they were asked to write codes or nicknames to keep their personal information anonymous and safe. The participants had the total freedom and the right to withdraw from the experiment at any time they desired. All the administrative authorizations necessary for conducting this research were obtained from the chief of the department of English at Mohamed Lamine Debaghine University. All the procedures of the experiment were explained and all the questions asked by the participants were answered, for the concept to be cleared and the ambiguity to be removed.

4.10. Data Analysis Plan

4.10.1. Data Analysis Software

The Software Package for the Social Sciences SPSS is used to analyze the data gathered from the above-mentioned tools.

4.11. Anticipated Limitations

First, not conducting the research on the entire population might threaten the external validity of the research. Also, conveniently selecting the sample without being able to control certain extraneous variables might affect the internal validity of the research; the observed changes could be of another variable rather than of the independent one.

5. Key Vocabulary

5.1. Machine learning technology

According to Nafea (2018), “machine learning is a subset of artificial intelligence (AI) that helps computers or teaching machines learn from all previous data to make intelligent decisions” . That is to say, instead of describing a process of a task to the machine, the latter is given a plethora of examples to independently learn from them.

5.2. Automated writing evaluation

It is defined as the ability of computer technology to evaluate and score written prose (Shermis & Burstein, 2003). Automated writing evaluation (AWE) systems provide L2 learners with written corrective feedback (WCF) instantaneously and as frequently needed, both inside and outside the ESL classroom. (Klebanov & Madnani, 2021)

6. Organisation of the Dissertation

The structure of the dissertation consists of four (4) chapters. The first chapter (Chapter 1) is dedicated to the review of related literature and the theoretical framework. The second chapter (Chapter 2) outlines and discusses the research methodology; it furnishes explanations of the adopted approach to provide answers to the posed research questions and hypotheses. The third chapter (Chapter 3) is focused on the presentation and interpretation of the research findings. The fourth chapter (Chapter 4) displays the discussion of the findings, implications and recommendations, for future research.

Chapter One: Literature review

Introduction	12
1.1 Definitions of writing skill	12
1.2 Nature of Writing skill	13
1.3 Characteristics of writing skill	14
1.3.1 Permanence and transcending time and space:	14
1.3.2 Participants and distance	14
1.3.3 Process time	15
1.3.4 Signs and symbols	15
1.3.5 Organisation and language	16
1.4 Importance of writing	17
1.5 Approaches of teaching writing	18
1.5.1 Text-oriented approach	19
1.5.2 Writer-Oriented approach	19
1.5.3 The Writing Process	21
1.5.4 Reader oriented approach	26
1.6 Paragraph structure	28
1.7 Components of Writing Skill	28
1.7.1 Content	29
1.7.2 Organization	30
1.7.3 Language Use	30
1.7.4 Vocabulary:	31
1.7.5 Mechanics	31
1.8 Rhetorical Patterns of Paragraphs	32
1.8.1 Descriptive paragraph	33
1.8.2 Cause and effect paragraph	33
1.8.3 Argumentative paragraph	34
1.8.4 Compare and contrast paragraph	35
1.8.5 Narrative Paragraph	35
1.9 Definition and Nature of Error	36
1.10 Types of Errors	36
1.11 Sources of Errors	37

	11
1.11.1 First Language Transfer (Interlingual Interference)	37
1.11.2 Intralingual Interference	38
1.11.3 Instructional Factors	38
1.11.4 Sociolinguistic and Contextual Factors	39
1.12 Common Errors Affecting Students' Writing Skill	39
1.12.1 Substance Errors	39
1.12.2 Spelling Errors	40
1.12.3 Capitalization Errors	40
1.12.4 Punctuation Errors	41
1.12.5 Textual Errors	41
1.12.6 Lexical Errors	41
1.12.7 Grammatical Errors	42
1.13 Feedback in Writing Skill	42
1.14 The Role of Feedback in Writing	43
1.15 Approaches of Corrective Feedback	45
1.15.1 Direct vs Indirect Feedback	45
1.15.2 Focused vs Unfocused Feedback:	45
1.16 Modes of Feedback Provision	46
1.16.1 Teacher feedback	46
1.16.2 Peer Feedback	47
1.16.3 Automated Feedback	48
1.17 Technology Integration	49
1.18 Technology And Writing Skill	50
1.19 Using Artificial Intelligence in Writing	51
1.20 Generative AI in Writing Instruction	52
1.21 Definition of Automated Writing Evaluation Tools	54
1.22 History of Automated Writing Evaluation Tools	54
1.23 Previous Studies on Automated Writing Evaluation Tools	56
1.24 Rational for Conducting the Study	61
Conclusion	61

Chapter One: Literature Review

Introduction

This chapter reviews the key theories and studies related to the present research. It begins with the definitions, nature, characteristics, and importance of writing. It then presents the main approaches to teaching writing, the structure of paragraphs, the main components of writing, and common rhetorical patterns. The discussion also covers students' writing difficulties, focusing on the types and sources of errors and the role of feedback in addressing them. Finally, the chapter examines Automated Writing Evaluation (AWE) tools, outlining their history, effectiveness, and relevance, which provides the basis for the current study on their role in developing EFL students' writing skills.

1.1 Definitions of writing skill

For acquiring proficiency in a new language, the mastery of the four language skills is imperative. These skills are categorized as receptive skills (listening and reading) and productive skills (writing and speaking). Surprisingly, the recognition of writing as an independent field of research did not emerge until the 1980s, when it captured scholars' attention and asserted its contribution to language learning (Hyland,2003). In this sense, the definition of writing has long been a topic of debate, lacking a conclusive agreement. Historically, writing was studied within the domain of linguistics and was often relegated to a secondary role as a mere tool for recording and reinforcing spoken language (Carter & Nunan, 2001). Speaking was seen as the primary language skill necessary for language acquisition, leaving writing on the sidelines of research endeavors. However, this view has since been largely discarded and writing is now seen as a vital skill in itself. This recognition contributes to the understanding of writing. It is commonly regarded as a "communicative social technology," involving the expression of ideas and thoughts through lasting

visible marks (Collinge, 1987; Carter & Nunan, 2001). It is described as the "single most important sign system ever invented on our planet," which serves to preserve knowledge and facilitate communication across time and space (Coulmas, 1989, as cited in Meletis, 2020, p.1)

Moreover, writing is viewed as the act of creating graphic symbols and structuring them according to established conventions to construct words that ultimately form coherent sentences (Byrne, 1988). However, contrary to a narrow view that writing is merely an application of grammar, it is better understood as a complex multidimensional process. This process demands problem-solving skills across various linguistic dimensions, including phonology, morphology, syntax, vocabulary, pragmatics, and discourse (Peterson, 2008). Accordingly, Nunan (2003) further emphasizes that writing is both a physical and a mental act. It involves the physical act of hand writing or typing and the mental processes of generating, articulating, and organizing ideas for reader comprehension. In the educational context, the writing process includes thinking, drafting, and revising, which require specialized skills that not every individual naturally develops. This complexity explains the challenges faced by learners in attaining mastery of this skill.

1.2 Nature of Writing skill

The prevalent misconception which considers writing as an exclusive talent that is reserved only for a selected few has been challenged. Instead, writing is presented as a skill that can be taught through intentional instruction and can be acquired by anyone who is willing to learn (Nunan, 2003). The fact that children reach fluency in spoken language by the time they reach puberty raises the question of why the same level of fluency is not achieved in writing by that age. Huck (2015) explains this by comparing writing to learning chess, suggesting that writing skills are not acquired in the same spontaneous manner as speaking skills. Rather, writing is portrayed as a rational exercise of the mind where learners actively express their unique voices and perspectives (Kane, 2000;

Hyland, 2003). According to MacArthur (2006), writing is not a simple transcription of speech, but rather a deliberate and a conscious problem-solving act that requires engagement and effort.

1.3 Characteristics of writing skill

Harmer (2006) and Brown (2007) have addressed specific characteristics of written language compared to the spoken language. These characteristics enhance our understanding of writing as a skill and make writing an essential, yet distinct, element of communicative competence with inherent complexities.

1.3.1 Permanence and transcending time and space

The immediacy of spoken communication, which is rooted in the present moment, contrasts with the enduring nature of written language (Harmer, 2006). While speech is transient, writing is permanent. This permanence makes it a complex skill to master. A writer can no longer make changes or clarifications once a piece is finalized. Such characteristic causes learners to feel anxious about delivering their final work (Brown, 2007). Teachers consequently play a critical role in providing learners with the necessary strategies to cope with this permanence, build confidence, and accept the lasting impact of their words. The challenge lies in teaching students to refine their work within time limits while still producing a polished final product. Thus, to teach writing effectively, educators must show students how to think quickly, accept the permanence of their words, and allow enough time for drafting and revision, demonstrating how language is used and taught in education.

1.3.2 Participants and distance

Communication, whether in spoken or written form, is shaped by participants and influenced by their relationship. In spoken communication where roles between speaker and listener shift dynamically, word choice is often influenced by the familiarity with the interlocutor (Harmer, 2006). In larger settings, speakers may adjust their content based on collective reactions from audience

making spoken interaction highly collaborative. In contrast, writing lacks this immediate response which requires writers to anticipate their audience in advance (Brown, 2007). Skilled writers therefore adapt their texts for either specific readers, such as a bank manager or university admission tutor, or for broader audiences, as in poetry. Because writers cannot rely on instant responses, they must employ cognitive empathy, the ability to imagine the reader's perspective, knowledge, and cultural background. This anticipation is what enables effective written communication (Harmer, 2006).

1.3.3 Process time

Face-to-face communication in speaking involves little to no time intervals between the production and reception of thoughts. While speech cannot be reversible once uttered, speakers can make immediate adjustments through repetition, rephrasing, or time-buying expressions. Writing, by contrast, is a more intentional and controlled process. It enables planning, revision, and production of multiple drafts (Brown, 2007). Nevertheless, not all writing requires the same amount of efforts. Postcards, internet writing, and text messages often show minimal drafting, as their language and format are predictable and resemble verbal interaction. Similarly, speaking is not always spontaneous; some speakers mentally plan or rehearse conversations, especially in more formal encounters. In summary, writers devote more time and effort to prevent misinterpretations because written communication lacks immediacy. Thus, the multi-draft nature of writing becomes necessary.

1.3.4 Signs and symbols

Signs and symbols are essential elements in both writing and speaking, as they enhance communication. In face-to-face communication, speakers and listeners use expressions, gestures, intonation, and other paralinguistic features such as body language and vocal variation. Writing, by

contrast, relies on orthographic and typographic devices. For instance, punctuation marks, such as question marks and exclamation points, can alter the tone and meaning of written sentences. The sequence of clauses or the use of underlining and italics can also convey slight variations in meaning, expression, tone, and emphasis. However, unlike in face-to-face interactions, writers do not have the flexibility of immediate clarification, which makes precision and adherence to linguistic conventions especially important. Writers must therefore be clear and unambiguous, since readers cannot seek instant explanation

1.3.5 Organization and language

The organization and language use vary between written and spoken form. Face to face conversations, particularly informal ones, rarely follow fixed patterns. By contrast, English writing discourse is often structured around a topic sentence, supporting evidence, and a conclusion. Moreover, speech relies heavily on fragments and single words rather than on complete sentences since it tolerates errors and malformed utterances. However, writing is expected to adhere rigidly to linguistic rules. It consists of fully developed sentences with correct spelling, punctuation, and grammar.

Additionally, another difference lies in lexical density, which refers to the proportion of content words (nouns, main verbs, adjectives, adverbs) compared to grammatical or function words. Written text tends to have a higher proportion of content words with distinct vocabulary choices. Certain words, like "got" and "cool," are more frequent in speech, while words like "evidence" and "customary" are more likely to occur in writing. However, these distinctions may vary according to the context and purpose of the communication. Casual everyday language, colloquial expressions, contractions, and sentence fragments, which are commonly used in oral conversations, tend to

decrease in formal settings, such as lectures or political addresses. Conversely, written language may adopt spoken features, particularly in dialogue passages of novels or electronic communication.

As a conclusion, writing is regarded as a skill because it requires crafting coherent and meaningful messages through precise grammar, vocabulary, and structure. In academic contexts, it also demands the ability to explain, compare, and argue effectively. Although it is a complex skill, writing can be improved through practice, feedback, and revision.

1.4 Importance of writing

Writing is a multifaceted skill which plays a pivotal part in a variety of social situations. It is considered one of the most significant skills that second language students need to acquire (Hyland, 2003). As a social practice, writing is central to human communication. It enables citizens to articulate their opinions, advocate for issues, or participate in community discussions (Bazerman, 2016). In this sense, writing is not only a form of personal expression but also a means of contributing to wider social and professional discourses.

Furthermore, the significance of writing extends to the academic realm, where students' evaluations are closely tied to their written work. Success requires a strong grasp of both general academic writing conventions and the specific requirements of individual disciplines. Additionally, writing enables students to acquire content knowledge, meet pedagogical requirements, and contribute to the academic discourse within their communities (Xu, 2016). When students write, they're not only helping themselves learn and contribute to their education, but they're also adding to the larger pool of information that everyone in their academic community benefits from. For instance, scientists rely on writing as a strategic tool to communicate their research findings to a targeted audience.

Writing is regarded as a crucial element in the learning process, extending beyond mere transmission of information to become a dynamic tool for cognitive development. It is vital in reinforcing grammatical structures, encouraging language exploration, and fostering the discovery of novel ideas (Raimes, 1983). That is to say, writing is not merely a skill; it is a medium to increase students' understanding and thinking skills as they not only comprehend their subjects thoroughly but also strengthen the connection between writing and thinking. Thus, teachers are encouraged to design writing tasks with the intention of enhancing both disciplinary knowledge and English writing competence (Xu, 2016).

Finally, moving beyond the academic sphere, the importance of writing extends to preparing students for life in this interconnected world. Writing becomes a way for students to express themselves across various purposes and in different genres, such as expository, descriptive, narrative, and persuasive writing (Hayik, 2018). This establishes writing as a very fundamental right that depriving individuals from it would result in their exclusion from social roles associated with power and prestige (Harmer, 2006).

1.5 Approaches of teaching writing

The recognition that writing is not an inherent skill but necessitates deliberate teaching has paved the way for various instructional approaches to appear. These approaches can be broadly divided into three perspectives: those emphasizing the text, those centered around the writer and influenced by cognitive psychology, and those directed towards the audience, encapsulating considerations of genre and rhetorical goals (Hyland, 2022). These approaches are shaped by learning theories and psycholinguistic models, serving as a reference framework for their implementation (Garcia-Debanc & Fayol, 2013).

1.5.1 Text-oriented approach:

This approach is known as the product approach. In the mid-20th century, spanning from the 1940s to the 1960s, the educational landscape witnessed the dominance of controlled composition, an educational approach that is rooted in behaviorism and derived from the audiolingual method (Matsuda & Silva, 2019). It aimed at enhancing students' written accuracy through repetitive exercises and imitation. Aligned with the notion that language is essentially spoken and learning involves habit formation, controlled composition classrooms placed a primary emphasis on formal precision (Cheung, 2016). It employed systematic habit formation to reinforce second language behavior. This approach resulted in a form-focused and product-oriented perspective which was evident in the grammar-translation method that emphasizes mechanical mastery through rote learning (Lam, 2018). Being an organized composition of elements that follow a set of rules, writing has been regarded for many years as a textual product by the product approach. As a result, writing was treated as a completed entity to be examined for language understanding rather than for its role in meaning-making (Hyland, 2021).

However, this perspective overlooks the dynamic and interactive nature of language, where meaning is co-constructed by writers and readers within specific socio-cultural contexts (Hyland, 2021). As these established beliefs are reconsidered, it becomes clear that writing is more than just a detached and lifeless product; it is a dynamic process connected with life experiences, cultural variations, and the interaction between writers and readers.

1.5.2 Writer-Oriented approach

This approach, known as the process approach, is strongly influenced by the famous cognitive process model of Flower and Hayes (1981). Unlike earlier methods that used introspection, this model was developed through protocol analysis, in which students were asked to think aloud while

composing their piece of writing. Instead of simply asking them to talk about what they usually do when they start to write, this technique enabled the researchers to capture learners' in-spot decisions to understand how they respond to a given prompt or a rhetorical problem.

According to Hayes and Flower (1983), the model is structured around three interrelated components of the writing process: the task environment, the writer's long-term memory, and the writing processes. These elements facilitate the complex process of transforming ideas into a written form. First, the task environment includes external factors that influence writing, such as the initial rhetorical problem or assignment and the evolving text. Additionally, the writer's long-term memory provides knowledge of the topic, the audience, and writing strategies; thus, it enriches the writing process through accumulated experience. The third component of the model, which is governed by a monitor, includes the processes of planning, translating, and reviewing the evolving draft. These processes involve a dynamic and non-linear sequence of actions since writers continuously revisit and modify their ideas and text throughout their writing journey.

Writing, therefore, is not just a task but a purposeful journey of discovery within the broader framework of goal-directed writing. Writing is seen as a means to develop thoughts. It allows for exploring ideas beyond what one already believes, questioning assumptions, and encouraging creative exploration throughout the writing process (Brown,2007). The act of translation, which involves transforming abstract thoughts into written form, is seen as a vital and unique task. Accordingly, writing is viewed as an evolving process, starting without a clear idea and letting words gradually shape meaning (Brown,2007). In educational contexts, the process tradition encourages a pleasant and collaborative environment. This method focuses on giving students sufficient time and minimal assistance to manage their writing processes (Matsuda & Silva, 2019).

However, defining the rhetorical problem is crucial for shaping the writing process and improving overall composition quality. Moreover, as the writer engages in the discovery and expression of meaning (Schmitt & Rodgers, 2002), challenges emerge, including organizing ideas and remaining creative within constraints and boundaries set by the writing task. The writer must consider factors such as the evolving text, memory, and plans. Thus, setting goals helps maintain focus and generate new ideas (Flower and Hayes, 1981).

Burns & Siegel (2017) emphasize the importance of self-discovery for students in developing fluency and originality in their writing. This is achieved through producing multiple versions of their work and engaging in discussions with both instructors and classmates. According to Raimes (1983), educators who follow the process approach priorities two critical elements: giving students enough time to explore and test their ideas, and providing constructive feedback on their writing attempts. Silva (1990) supports this viewpoint by stating that the process approach aims to allow students' ideas to shape the form of their writing. The main goal of process pedagogy is to assist students in cultivating efficient strategies for different phases of writing. Accordingly, Writing is a complex task involving cognitive process that requires revisiting, refining, and creativity. Thus, the focus is on the process rather than the final product, with the form serving as a means of conveying the content and purpose (Schmitt & Rodgers,2002).

1.5.3 The Writing Process

Challenging the idea that writing is a linear process, Santangelo et al. (2016) argue that writing entails a sophisticated interplay of interconnected or nested activities. That is to say, the writing process involves a continuous cycle that encompasses activities such as brainstorming, drafting, writing, feedback, revising, and editing. This process emphasizes that learning to write is a

series of skills that leads to a final product rather than a one-time endeavor (Nunan ,2003). Accordingly, several stages of the writing process have been suggested.

1.5.3.1 Planning (Prewriting)

In stimulating idea generation, Nunan (2003) emphasizes the significance of invention techniques such as brainstorming, word mapping, and quick writing. Students are encouraged to generate ideas rapidly and collaboratively through the use of brainstorming, which fosters creativity and exploration. Brainstorming sessions can be conducted individually, in pairs, or in groups, where students rapidly list all ideas related to a given topic, either through writing or verbal discussion. This process is characterized by spontaneity and minimal planning which enables students to develop a broad variety of ideas quickly.

While some of these initial ideas may seem obvious or clichéd, allowing adequate time for brainstorming helps students to move beyond these initial thoughts and uncover more sophisticated and original ideas (Nunan, 2003). From the pool of brainstormed ideas, students can then select those they find most engaging or feel they can be effectively developed into a coherent essay. Wordmapping serves as a more visual alternative to traditional brainstorming. When students engage in wordmapping, they typically initiate the process by placing a central idea at the top or center of a blank page. Subsequently, they generate related ideas or words and visually depict connections between them using a variety of shapes such as boxes, circles, and arrows. This technique offers students a methodical approach to organize their thoughts and to explore relationships between concepts. Quick writing encourages students to write freely and without restraints by fostering rapid thinking and promptly initiating their writing process (Nunan, 2003).

After selecting a topic, students write continuously for a brief duration, typically around 10 to 15 minutes. During this time, students are encouraged to refrain from editing or revising their work and to focus solely on expressing their ideas without interruption (Nunan, 2003). Disregarding concerns about spelling, grammar, or punctuation, this approach prioritizes the free flow of thoughts. Following the quick writing session, students review their work and identify key ideas or intriguing thoughts by underlining them. These highlighted points are then incorporated into the initial draft of their essays. This method allows students to rapidly generate ideas and subsequently refine them during the drafting process.

In a similar vein, Seow (2002) supports the implementation of structured prewriting activities, such as group brainstorming, clustering, rapid-free writing, and WH questions. By encouraging critical thinking and generating ideas, these activities establish the foundation for students to produce effective writing. Group brainstorming is recognized as an essential technique that enhances the shared and collaborative act of generating ideas among students. Similarly, the technique of clustering emerges as a valuable instrument, facilitating the visual organization of interconnected concepts, thereby enhancing students' ability to structure their ideas coherently (Seow, 2002). Rapid-free writing is identified as an additional crucial strategy that promotes students' ability to generate ideas quickly and without constraints, thereby cultivating spontaneity and unrestricted creativity. Furthermore, by utilizing WH questions, instructors encourage students to delve into the underlying complexities and contemplate a wider range of perspectives on the subjects at hand (Seow, 2002). Educators may pose reflective questions to students to deepen their understanding of their own writing processes. Questions can be asked about how students approach writing, the effectiveness of their techniques, and how their strategies vary depending on the task at hand which encourages self-awareness and critical reflection. Through active participation in these

prewriting activities, students establish a solid basis for their writing endeavor through improving both the fluency of expression and the coherence of their compositions.

1.5.3.2 Drafting

During the writing stage, students engage in the process of expressing their thoughts fluently, without being restricted by worries about grammar or structure (Seow, 2002). As highlighted by Seow (2002), this phase emphasizes the importance of visualizing the intended audience and encourages students to adapt their writing style accordingly to ensure successful communication. It is crucial for students to use attention-grabbing techniques, such as startling remarks or quotes, to engage readers from the very beginning (Seow, 2002; Nunan, 2003). Furthermore, Nunan (2003) supports the idea of prioritizing the development of ideas and structure during the drafting stage, as content should take precedence over mechanics at this point. By following this approach, students can effectively convey their message to the audience and create an engaging and coherent piece of writing.

1.5.3.3 Responding

According to Seow (2002), responding to student writing, whether by the teacher or peers, is a pivotal aspect of implementing process writing effectively. Responding represents the teacher's immediate reaction to students' drafts. This feedback, whether oral or written, occurs once students have completed their initial draft and just before they move to the revising phase. Seow (2002) suggests that the failure of many writing programs in schools may stem from responding being postponed until the final stage, where teachers both respond, evaluate, and edit students' finished texts. This approach may give students the false impression that their work is complete. Thus, students would refrain from further improving their written productions. Seow advocates for text-

specific responses that go beyond generic comments like "organization is OK" or "ideas are too vague." Instead, teachers should provide helpful suggestions and ask probing questions to guide students in revising their initial drafts. These responses can be given in various formats, such as in the margins, between lines of text, or at the end of the student's writing.

Nunan (2003), suggests that once students have submitted their drafts, instructors should provide feedback that corresponds to the guidelines given to students. The feedback should focus on the overall ideas and organization of the writing rather than solely on grammar and spelling. Additionally, Nunan recommends integrating peer feedback into the process, where students exchange papers and offer comments on each other's work.

1.5.3.4 Revising

After receiving feedback, students proceed to revise their papers. Nunan (2003) warns against the misconception that revision is solely about correcting mistakes. Instead, he emphasizes the importance of discussing reorganization and idea development separately from editing for grammar or spelling. Seow (2002) also encourages students to reflect upon some key aspects of their writing, such as identifying the strengths and weaknesses of their draft, clarifying the main idea, elaborating on underdeveloped points, assessing where more examples and details need to be implemented, determining areas where organization is unclear and confusing, and considering parts of their writing where the interest of the reader may have faded. By dedicating attention to these aspects of revision, students can improve the overall quality and coherence of their writing.

1.5.3.5 Editing and proofreading

Prior to submitting their final draft for evaluation, students at this stage are expected to focus on polishing their piece of writing. In the previous stages, the primary focus is on developing ideas

rather than the surface structure of the language. This is why editing is often left for the final stage before evaluation. However, according to Nunan (2003), this process is not linear, and the editing phase could be implemented whenever students spot errors. Nevertheless, students are usually encouraged to save editing until the end to avoid disturbing the flow of ideas. Thus, at this stage, students should concentrate on other aspects of language, such as subject–verb agreement, correct verb tense and form, proper use of adjectives and adverbs, avoidance of run-on sentences and sentence fragments, inclusion of appropriate vocabulary, and correct punctuation and spelling (Seow, 2002).

1.5.3.6 Evaluating

This stage is where teachers often complain of time constraints, large classrooms, and an overwhelming curricular load. In this stage, the teacher is supposed to provide overall feedback on students' work. This evaluation could be either holistically or analytically using rubrics. In other words, a teacher may take a holistic approach by giving students an overall numerical score without detailed feedback on each writing aspect, or he can take an analytical approach by assigning separate, detailed scores for specific components such as spelling, grammar, content, and organization. The choice of either way is based upon the purpose behind the evaluation itself (Seow, 2002).

1.5.4 Reader oriented approach

Producing an accurate and grammatically correct piece of writing is not the end goal of the reader-oriented approach to teaching writing. Rather, the focus is to serve the purpose of engaging with the reader and choosing words that make sense to the audience (Hyland, 2021). This can be viewed in Halliday's Systemic Functional Linguistics (1994), where the emphasis is on the function that language serves in the reader's mind. Specifically, sentence structures are chosen to fulfill certain functions, such as topic sentences, controlling ideas, and supporting details that together create

coherent paragraphs, each serving a different purpose. These purposes are referred to as genres, which ultimately represent the genre approach to writing (Hyland, 2003). There exist several types of such paragraphs: narrative, descriptive, expository, persuasive, and creative

Writing is viewed as a social interaction between the audience and the writer by serving the readers' rhetorical demands in a specific context (Hyland, 2021). This approach prioritizes anticipating the reader's possible reactions, expectations, knowledge, and interpretation of the written text. In the classroom setting, the teacher can help develop the students' audience awareness through activities that implement role plays, such as situations where students imagine themselves writing a job application letter to secure a working position and expect a response from the reader, who, in this case, is the CEO of the company. In this approach, peer feedback is seen to be more effective than teacher feedback as it provides a more authentic social context (Hyland, 2021). The genre-based approach is closely connected with Vygotsky's theory of scaffolding zone of proximal development (1978), which means that students enhance their writing abilities more efficiently when they are supported by peers and teachers with wider experience. Students gradually build their writing abilities in diverse academic and professional contexts by recognizing the purpose, audience, and social context that are associated with different genres. Writing then becomes a tool for social interaction where both the reader and the writer collaborate to create meaning; thus, this ensures that the intended message is conveyed effectively to its intended audience. (Hyland, 2003)

Genre pedagogy prioritizes explicit language awareness over trial and error. Teachers assist learners to understand writing skill by delivering samples of expert texts. Though this method facilitates learners' comprehension of conventions in writing, it risks becoming rigid and limit students' creativity if teachers represent these genres as fixed templates and strict rules instead of being flexible structures (Hyland, 2003).

1.6 Paragraph structure

A paragraph is a group of sentences that pertain to one central idea. It is ordinarily composed of one or more sentences, depending upon the level of detail required to discuss the idea (Oshima & Hogue, 2006). A paragraph may vary in length but needs to be sufficiently long to fully develop the central idea. In academic writing, paragraphs may respond to particular questions or be part of a larger piece of work, for example, an essay or a book. Paragraphs are usually indicated by indenting the first word approximately half an inch from the left-hand margin. According to Oshima and Hogue (2007), a well-structured paragraph must contain a topic sentence, supporting sentences, and, at times, a concluding sentence. A good paragraph contains a clear topic sentence, which is a complete thought that has both a topic and a controlling idea which somewhat limits the scope of the paragraph. The topic sentence serves as a blueprint that informs the writer of what information to include and the reader of what the paragraph will be about. Depending on the structure, the topic sentence can be placed at the beginning, middle, or end of the paragraph. Experienced writers use a variation of these positions in their writings. Supporting sentences offer proof or details to support the topic sentence so that the paragraph is conclusive and convincing. It expands on the topic by adding more information, examples, or explanations. Finally, concluding sentences, which are not always necessary, reminds the reader of the discussed idea. It summarizes the main points or restates the topic sentence in different words in order to complete the paragraph. In some cases, especially in multi-paragraph essays, no concluding sentence is necessary (Oshima & Hogue, 2006).

1.7 Components of Writing Skill

According to Jacobs et al. (1981), the teaching and assessment of writing, since the time of Aristotle, has traditionally focused on a few key aspects: generating ideas (what to say), organizing them logically (how to structure them), and presenting them effectively (how to express them with

clear language). Additionally, the organization of ideas and the creativity in expression used by writers play a significant role in shaping the reader's judgment of the text. However, the impact of a writer's thoughts on readers goes beyond the content; it is also influenced by the syntactic, lexical, and mechanical features of the language used. ESL/EFL teachers might focus more on form and errors because they're trained to correct them, based on the view that such intervention contributes to more effective language learning. Accordingly, Jacobs et al. (1981) identify five distinctive components of the writing skill: content, organization, vocabulary, language use, and mechanics. Each of these components play a pivotal role in the comprehensive assessment of the writing proficiency. Hughey et al. (1983) further defines these components as follow:

1.7.1 Content

Hughey et al. (1983) contend that the depth, originality, and relevance of the writer's ideas define the substance of a written work. First, a well-developed work of writing should demonstrate a clear understanding of the subject through the support of accurate and relevant information. This encompasses the capacity to identify and connect several facets of the subject. Strong content is also marked by the presence of several main points that are well developed with enough detail to enrich the message. Moreover, the use of original, concrete examples and factual support such as definitions, comparisons, and illustrations helps to create a more interesting development of the piece of writing. The effectiveness of content is further reflected in how well the writer maintains the central idea throughout the composition and avoids introducing unrelated or extraneous material. Therefore, this criteria of evaluation shows that content is an important part of writing as it ensures both clear expression of ideas and meaningful intellectual engagement with the topic in academic writing.

1.7.2 Organization

As conceptualized by Hughey et al. (1983), it refers to the clarity and coherence with which ideas are arranged and presented within a text. Effective organization requires a discernible structure that includes an introduction, a body, and a conclusion. The ideas within and between paragraphs must be logically sequenced. This entails using clear methods such as chronological order, spatial arrangement, or importance-based progression. Transition, both within and across paragraphs, are essential for guiding the reader smoothly from one idea to another; thus, reinforcing cohesion and unity. Additionally, the written text must flow in a purposeful and organized manner through ensuring that every paragraph keeps a single focus which helps to create a cohesive whole. Therefore, facilitating both the writer's expression and the reader's understanding, organization functions as the structural backbone of writing.

1.7.3 Language Use

Moreover, Hughey et al. (1983) explain that language use relates to the grammatical correctness and the syntactic control that is displayed in a writer's work. This includes the effective use of complex sentence structures which are appropriate in form and function. Sentences should show a range of syntactic patterns, be well-formed and appropriately sequenced. Writers are expected to employ coordination and subordination accurately, using elements like conjunctions, adverbials, and punctuation to maintain coherence and clarity. Hughey et al. (1983) also stress the need of varying sentence length and structure for rhetorical effect as well as suitable use of sentence initiators like *It* and *There*. Moreover, the accurate use of verbs, nouns, articles, pronouns, and prepositions is crucial since these grammatical elements guarantee that the meaning is communicated precisely. The mastery of language use not only improves fluency but also reveals the writer's command of the linguistic norms that are expected in formal and academic writing.

1.7.4 Vocabulary:

Hughey et al. (1983) define vocabulary in writing as the range, accuracy, and appropriateness of word choice applied to transmit meaning. Using precise and varied language that successfully expresses ideas, emotions, and intentions reveals a strong command of vocabulary. To allow for clarity and subtlety in expression, writers are expected to select words and idioms that are contextually appropriate, accurate, and idiomatic. Effective vocabulary use also includes strong verb selection, the correct use of synonyms and antonyms, and an awareness of connotative versus denotative meanings. In addition, writers should carefully consider where words are placed in a sentence, how repetition can be used to emphasize important points, and how the smooth use of transition words can help the reader follow changes in tone, ideas, or arguments. A strong mastery of vocabulary choices is also shown through the correct use of word forms such as prefixes, suffixes, and compound words. Vocabulary is indeed an essential part of writing because it helps clearly express the writer's message and demonstrates their language skills and ability to communicate effectively.

1.7.5 Mechanics

Mechanics, as described by Hughey et al. (1983), refer to the technical rules that guide the general form of the written language. These include spelling, punctuation, capitalization, paragraphing, and handwriting, which are all important for keeping clarity and readability. That is to say: appropriate punctuation, such as periods, commas, semicolons, and question marks clarify the rhythm and structure of sentences while the correct spelling guarantees that words are immediately recognizable and eliminates ambiguity. Furthermore, contributing to grammatical accuracy and visual clarity, capitalization is used to signal sentence beginnings and to demonstrate proper nouns. In addition to these elements, paragraphing also forms a key component of mechanics,

as it involves the visual and structural organization of written language. Although it serves an organizational purpose, paragraphing is considered a mechanical aspect because it follows established writing conventions, such as beginning a new paragraph when introducing a new idea, indenting the first line, and grouping related sentences together. These visual markers help the reader identify shifts in thought and improve the overall flow and coherence of the text. In addition, although less emphasized in digital contexts, the legibility of handwriting remains relevant in settings that require handwritten work. Therefore, mechanics form the foundation of written communication, allowing the reader to access the writer's message clearly and without distraction.

1.8 Rhetorical Patterns of Paragraphs

Rhetorics, be it spoken or written, refers to the art of effective communication (Robitaille & Connelly, 2007). In the realm of writing composition, Rhetorical patterns are considered frameworks that provide students with blueprints for expressing their ideas effectively and organizing them logically (Hyland, 2019). Rhetorical patterns are also known as Rhetorical modes or patterns of development (McWhorter, 2016). These patterns are essential tools that writers use to shape paragraphs and essays, as these structured methods for organization offer a variety of strategies for developing and arranging content (Robitaille & Connelly, 2007). Successful writing involves analyzing the rhetorical context, including purpose, audience, and tone, since each of these modes requires specific writing forms (Langan & Albright 2020). In other words, each type of paragraph has its characteristics and features. Thus, using the correct rhetorical pattern for the suitable purpose is essential for clarity and coherence. These rhetorical patterns include the following types of paragraphs.

1.8.1 Descriptive paragraph

The primary purpose of a descriptive paragraph is to engage the reader by creating a vivid mental image of an object, a person, a place, or an experience through adhering to the five senses (Folse et al., 2014). A skilled writer is able to paint a word picture using sensory rich descriptions of specific details that enable the reader to imagine the smell, the touch, the taste, the sounds and the view of an intended scene (Savage & Shafiei, 2007). This imagery could be achieved through using figurative language such as metaphors; concrete and specific nouns and verbs; and descriptive adjectives and adverbs (Robitaille & Connelly, 2007). Effective descriptive writing relies on creating a dominant impression, a central feeling or attitude that shapes the reader's understanding of the subject (McWhorter, 2016). The writer's perspective and clear purpose, whether to describe something objectively or to express a personal viewpoint, serve as the guiding force behind the choice of details to be included or excluded, which eventually creates the desired dominant impression (Robitaille & Connelly, 2007). Descriptive paragraphs can be used in literary works and creative writing, such as short stories and novels, as well as in academic and scientific writing where detailed descriptions of scientific experiments or specific observations are provided (McWhorter, 2016). Moreover, in a descriptive paragraph, the topic sentence should clearly state what is being described, while the controlling idea should express the main impression or feeling about the subject. The supporting sentences, then, add rich sensory details to help the reader imagine the scene vividly (Oshima & Hogue, 2006). This highlights the importance of logical organization, such as spatial or chronological order, in helping readers visualize the description clearly (Oshima & Hogue, 2006).

1.8.2 Cause and effect paragraph

According to Folse et al. (2014), cause and effect paragraph encompasses understanding the reasons why events happened and what results they engender. Causes are the reasons behind an

event which occur beforehand, while effects are the outcomes that follow the incident. This rhetorical pattern is widely used across various fields including history and science to explain the factors behind actions and their consequences. Robitaille and Connelly (2007) advocate that effective outlining of cause or effect paragraphs entails careful consideration of the composition's purpose and scope. Writers must decide whether to focus solely on causes, effects, or a combination of both based on the complexity of the topic and the limitations of length (McWhorter, 2016). To embellish coherence, related causes or effects should be organized into thematic categories. Moreover, writers must establish clear causal relationships, avoid confusing correlations with causation, and refrain from oversimplifying complex issues (Robitaille & Connelly, 2007). The topic sentence should clearly state the focus, while the supporting sentences develop the relevant causes or effects accordingly.

1.8.3 Argumentative paragraph

Argumentative and persuasive writing aims to convince readers about a specific claim using logical reasoning and credible evidence (McWhorter, 2016; Robitaille & Connelly, 2007; Langan & Albright, 2020). A clearly formulated and focused topic sentence is important; it is often supported by inductive reasoning (generalizing from specific cases) or deductive reasoning (applying general principles to specific cases) (McWhorter, 2016). Writers need to consider their audience, whether they are sympathetic, neutral, or hostile, and adjust their tone and evidence accordingly (McWhorter, 2016). Choosing genuinely debatable topics while avoiding overly simplistic or factually incorrect topics increases the argument's value (Robitaille & Connelly, 2007). Evidence should include rational explanation and be cohesively integrated, such as statistical information, illustrative examples, and expert opinions (Langan & Albright, 2020). Finally, addressing counterarguments by

acknowledging or refuting them and appealing to the readers' values and emotions can strongly enhance the effectiveness of the arguments (Langan & Albright, 2020).

1.8.4 Compare and contrast paragraph

The comparative and contrast rhetorical method involve analyzing the similarities (comparison) and differences (contrast) between two or more subjects to elucidate, inform, or persuade the reader (McWhorter, 2016; Robitaille & Connelly, 2007). As a multifaceted developmental approach, it is frequently employed in academic writing, particularly in essay assessments. This rhetorical pattern enables students to exhibit understanding and critical thinking through the exploration of the relationship between concepts (Robitaille & Connelly, 2007). For comparison or contrast to make sense, the subjects must have a common ground, such as being from the same category. A strong topic sentence in this type of writing usually mentions the two subjects that are being compared and whether the focus is on their similarities, differences, or both (Langan & Albright, 2020; Robitaille & Connelly, 2007). Writers must select between two organizational strategies. First, the point-by-point method, which ensures balance and clarity, examines both topics concerning each specific point. Second, the subject-by-subject method, which provides depth but potentially introduces bias, investigates all facets of one topic before transitioning to the next (McWhorter, 2016; Langan & Albright, 2020). Transitional terms and phrases, such as "similarly," "on the other hand," or "in contrast," are utilized deliberately to aid readers in understanding the reasoning behind the comparison or contrast (Robitaille and Connelly, 2007).

1.8.5 Narrative Paragraph

A narrative paragraph recounts a story by presenting a sequence of events, usually in the order they have occurred, using chronological order and time signals such as first, next, and afterward (Oshima & Hogue, 2007; Robitaille & Connelly, 2007). Unlike mere information

exchange, narratives create meaning by indicating how events are linked. Writers use active verbs, descriptive phrases, and dialogues to help readers imagine the events as they happen and understand the related feelings (McWhorter, 2016; Robitaille & Connelly, 2007). In addition, a good narrative should have a perceivable goal or moral lesson that could be either explicitly or implicitly implied within the story (McWhorter, 2016). Instead of merely listing events, effective storytelling emphasizes important moments. It entails the use of flashbacks or foreshadowing, increasing tension, and conflicts to improve the reader's engagement with the story (McWhorter, 2016). The narrator must also take into account the used point of view: first-person provides a more intimate tone, whereas third-person allows for more objectivity and detachment (McWhorter, 2016).

1.9 Definition and Nature of Error

According to Ferris (2011), an error, in the field of second language learning (SLA), is defined as an unintentional violation and a systematic deviation from the established target language norms. Errors reflect a learner's incomplete or incorrect linguistic competence rather than temporary lapses in performance. James (2013) argues that errors are beyond the learner's means to self-correct and are an indication of a gap within the interlanguage system. The latter represent an intermediate linguistic phase between L1 (first language) and TL (target language). According to Cherrington (2000), mistakes, on the other hand, are caused by slips or lapses due to tiredness or fleeting distractions and are linked to temporary learning problems; by contrast, errors are systematic and deeper learning problems. Deng (2019) argues that learner errors are not merely results of L1 interference but also stem from internal learning processes and universal developmental strategies.

1.10 Types of Errors

Errors have been classified into distinct types based on their sources and linguistic characteristics in order to better understand learner language and to inform effective teaching

strategies. According to James (2013), there are two major classifications: overt errors, which are evidently ungrammatical and thus easily distinguishable, and covert errors, which, though grammatically correct, they do not convey the intended meaning. Another classification involves interlingual and intralingual errors. Interlingual errors result from first language (L1) interference, whereas intralingual errors arise from within the target language itself due to processes like overgeneralization and simplification (Cherrington, 2000; James, 2013; Deng, 2019). Moreover, Ferris (2011) distinguishes between other types of errors: global and local errors. Global errors hinder overall meaning and understanding, whereas local errors are sentence-level errors that do not interfere with the overall comprehension of the intended meaning. Another dichotomy, as noted by Ferris (2011), distinguishes between treatable and non-treatable errors. A treatable error pertains to a linguistic structure that follow a clear pattern, making it possible for teachers to explain the rule, provide practice, and help learners correct it. The treatable error is rectifiable as the student can be directed to a grammar book or a set of rules to address the problem. Conversely, an untreatable error is idiosyncratic that it necessitates the pupil to employ their learned linguistic knowledge for self-correction, for instance, preposition usage and issues related to word order.

1.11 Sources of Errors

1.11.1 First Language Transfer (Interlingual Interference)

Cherrington (2000) highlighted that interlingual interference is a traditional and a predictable source of errors. Interlingual errors occur as a result of negative transfer or interference from the learner's first language (L1). This happens when learners rely on their prior knowledge and explicitly apply rules, vocabulary, or grammatical structures from their original language to the target language (Richards & Sampson, 1974). Language transfer is often observed in the early stages of language

acquisition (James, 2013). Nonetheless, excessive reliance on L1 patterns may impede the precise acquisition of L2 norms.

1.11.2 Intralingual Interference

Beyond L1 interference, many errors originate within the system of the target language itself. Learners attempt to internalize and structure the new linguistic rules; however, they can apply them inconsistently or incorrectly (James, 2013). Intralingual errors, thus, result from overgeneralization, which refers to applying a grammatical rule too broadly, such as using regular past tense suffix “-ed” with irregular verbs (“goed” for “went”), and also stem from the simplification of complex structures or incomplete rule application like omitting auxiliary verbs: “She going home” instead of “She is going home” (Cherrington, 2000). This demonstrates the cognitive process of language acquisition, where learners create and modify hypotheses according to the linguistic input they receive (Richards & Sampson, 1974). Interlingual interference represents the efforts to make language processing and production easier, but it often leads to ungrammatical or incomplete constructions.

1.11.3 Instructional Factors

Teaching methods, classroom practices, and learning materials may significantly contribute to the occurrence of errors among learners. The way a language is taught can shape how learners understand, internalize, and apply linguistic rules. According to Cherrington (2000) and James (2013), disorganized lessons, poorly explained concepts, and a lack of practice can cause learners to adopt faulty assumptions about the functional elements of a language. For instance, when teachers overemphasize certain rules of grammar while ignoring exceptions, they tend to cause learners to overgeneralize the rules (Cherrington, 2000; Richards & Sampson, 1974).

1.11.4 Sociolinguistic and Contextual Factors

The sociolinguistic environment under which a language is acquired may significantly influence the nature and the frequency of errors. Richards and Sampson (1974) argue that learners' motivation, sense of identity, and relationship with the target language community are fundamental determinants of the process of language acquisition. For instance, learners who are motivated by being part of the target language community make fewer errors due to their higher level of involvement and greater frequency of contact with the target language. By contrast, learners who learn the language for purely functional reasons may commit more errors. Limited exposure to authentic language use may lead to inflexible or inauthentic linguistic patterns that fail to represent actual usage (Puimège and Peters, 2019).

1.12 Common Errors Affecting Students' Writing Skill

In his influential work, *Errors in Language Learning*, James (2013) presents his multidimensional taxonomy of common students' errors viewed in L2 writing composition. They are categorized into five levels: substance, text, lexis, grammar, and discourse errors. However, due to the fact that James views lexis and grammar as interrelated entities representing how learners realize meaning in text, these levels can be classified into three broader categories as: substance errors, textual errors, and discourse errors. They reveal distinct aspects of learner interlanguage and different developmental and cognitive challenges in L2 writing.

1.12.1 Substance Errors

According to James (2013) substance errors are also known as mechanical errors which refer to the graphical and visual representation of written language. They are common in early interlanguage development and frequently result from L1 interference, especially in contexts where the learners' first language differs significantly in writing conventions. In writing, substance errors

include misspellings, misuse of punctuation, and inconsistencies in capitalization, and paragraph spacing errors. Although often considered superficial, these errors significantly affect the readability, clarity, and academic representation of texts.

1.12.2 Spelling Errors

Spelling errors are considered violations of the conventional orthographic rules of the English language (Abu Rass, 2024). According to James (2013), these errors can be attributed to Phonological approximations, limited understanding of English orthographic rules, and first language (L1) interference. For instance, students would write *belive* instead of *believe*, utilizing accurate phoneme-grapheme correspondences. In the context of Arab EFL learners, a prevalence of spelling errors is detected. English spelling rules present substantial challenges for the Arab learner, and they are considered the main source of various orthographic errors (Altamimi et al., 2018). These errors can also be accounted for by the transfer of the Arabic language itself, where the written form of words is represented phonetically, as opposed to the nature of the English language. Consequently, it is likely that Arabic speakers would write English words based on their phonetic pronunciations (Altheneyan & Boayrid, 2019). In fact, English has a complicated orthography in which one phoneme can receive numerous representations and might even have variable pronunciations (Abu Rass, 2024).

1.12.3 Capitalization Errors

Fitria (2024) contends that capitalization is a crucial element of English writing, particularly in academic and scientific contexts. It entails using capital letters at the beginning of sentences and for proper nouns such as names, places, and special terms. Correct capitalization aids readers to understand where sentences begin, recognize important words, and follow the structure of the text more easily (Fitria, 2024). When capitalization is used consistently, it enhances the overall neatness

and readability of the text. In the Arabic context, Abu Rass (2024) indicated that most learners frequently neglect necessary capitalization at the beginning of sentences and proper nouns or apply it inconsistently or inappropriately throughout their writing. This is mostly due to the lack of capitalization rules in the Arabic language where no differentiation between upper- and lower-case letters exists (Ababneh, 2017).

1.12.4 Punctuation Errors

Due to the major differences in punctuation systems between English and Arabic, Arab learners frequently commit errors in English punctuation (Ahamed, 2016). For instance, they barely utilize semicolons or exclamation marks in their English compositions as these are neglected in Arabic. Additionally, because it is customary in Arabic language to use one or two full stops within a paragraph while utilizing commas to separate full sentences or run-ons, students tend to utilize commas excessively and inappropriately when writing in English (Abu Rass, 2024). Students also entirely omit periods after complete sentences due to the lengthy structure of Arabic sentences; thus, they use punctuation according to the Arabic language punctuation rules. (Altheneyan & Boayrid, 2019a).

1.12.5 Textual Errors

Text refers to any representation of language produced through the application of encoding rules. This means the grammatical and lexical conventions used to structure and convey meaning in discourse. Textual errors occur when these lexico-grammatical rules are misapplied, resulting in a failure to achieve coherence or texture in the text (James, 2013).

1.12.6 Lexical Errors

Lexical errors refer to learners' incorrect use of vocabulary, leading to inappropriate or inaccurate word choices regardless of being grammatically correct (Agustín Llach, 2011). They are

classified into formal errors (incorrect word formation, e.g., convinceful for convincing), semantic errors (inaccurate word meaning, e.g., library for bookshop), and collocational errors (unnatural word combinations, e.g., do a mistake instead of make a mistake). Lexical errors are not merely indicators of deficiency but rather reflections of learners' evolving interlanguage and progress in vocabulary acquisition and lexical competence (Agustín Llach,2011). Unlike grammatical errors that often have clear rules, lexical competence is subtler and highly context-sensitive, which makes these errors more resistant to direct correction (James 2013). In the Arab context, the lexical errors are reported to be source of direct translation from Arabic to English language (Ababneh, 2017).

1.12.7 Grammatical Errors

Hernandez (2011) asserted that grammatical errors, which also refer to usage errors, may occur in several elements, including verbs, pronouns, diction, articles, spelling, word order, prepositions, and sentence structure. It is the most traditionally studied aspect in error analysis and is treated as the primary indicator of language proficiency, yet research in applied linguistics has shown that grammar should be evaluated alongside textual and discourse-level competencies to obtain a holistic picture of learner development (James, 2013). In the Arabic context, many errors were reported to be due to differences between Arabic and English and to limited knowledge of English grammar (Abu Rass, 2024). Discourse Errors.

1.13 Feedback in Writing Skill

A major concern for teachers is to improve their students' writing accuracy since the latter is crucial for various professional and academic contexts. It is evident that students writing errors cannot disappear naturally and that recurring errors are stubborn to be eradicated regardless of explicit provision of language knowledge (Ferris, 2003). Thus, feedback in this regard refers to the

continuous exchange of information between instructors and learners which enables students to remain aware of the progress towards achieving their learning goals (Glass & Marzano, 2018).

In its broadest sense, feedback has been described as a response to an individual's performance on a task which contains information that can be used to improve future performance (Hyland, 2019). More specifically, corrective feedback (CF) refers to the provided information by teachers, directly or indirectly, on learners' language use that is deviated from the target usage in writing with an intention to correct and prompt revision of the original output (Bitchener & Ferris, 2012). Similarly, Leow and Driver (2020) define CF as a response by a teacher, researcher, or peer to an error committed by an L2 learner. It can be delivered in the learner's first or second language and in oral, written, or digital formats.

Written CF, in particular, offers advantages over oral CF because it is explicit and learners are more likely to notice it (Bitchener, 2012). Furthermore, written CF serves as a permanent reference that students may return to at any moment. This characteristic allows them to carefully examine the received feedback and make the required adjustments. The possibility for delayed processing in written corrective feedback reduces the cognitive load that is associated with oral CF, which needs instant understanding and reaction (Nassaji, 2021).

1.14 The Role of Feedback in Writing

The effectiveness of corrective feedback in writing skill has been a topic of debate for several years. Truscott (2007) claims that Corrective feedback is deemed to be harmful and useless as it often causes learners to avoid complex structures to reduce mistakes, which limits their progress, leads to frustration and demotivation from excessive feedback. This lack of motivation leads students to merely memorize corrections without deep understanding and learning. Therefore, he considers CF to be a waste of teachers' valuable time for more meaningful writing practice.

However, viewed from various theoretical perspectives, CF is found to be influential. From a cognitive perspective, corrective feedback can help learners notice the gap between their output and target forms (Schmidt, 2001), therefore, modifying their output accordingly (Swain, 2005). This helps learners to process the input more deeply by integrating it with their existing knowledge (Gass, 1997). This process involves awareness, understanding, and alteration of prior knowledge. Similarly, Skill Acquisition Theory holds that feedback helps learners move from declarative knowledge (knowledge of the rule) to procedural knowledge (application of the rule), ultimately leading to automatization, in which linguistic behaviors become increasingly implicit and subconscious through repeated rehearsals (Anderson, 1993). Moreover, sociocultural theory accounts for corrective written feedback as a type of scaffolded support that allows learners to incorporate corrections and achieve greater control over their production (Aljaafreh & Lantolf, 1994).

Recent empirical studies have attested to the finding that corrective feedback plays an important role in promoting writing accuracy and overall progress in second language acquisition (L2). To illustrate, Patra et al. (2022) indicate that feedback significantly reduce academic anxiety, enhance academic performance, and positively affect learners' attitudes towards education. Similarly, Sadeghi and Mohammadi (2024) found that students showed an increased capacity to identify their frequent errors autonomously after extensive exposure to corrective written feedback. In addition, Bitchener and Knoch's (2009) showed that WCF resulted in statistically significant long-term improvements in students' accuracy in writing. Nassaji and Kartchava (2021) emphasized that the role of corrective feedback is not universal. Rather. It differs according to its type, the nature of the targeted error, the level of proficiency of learners, and their developmental readiness.

1.15 Approaches of Corrective Feedback

The debate surrounding the effectiveness of corrective feedback has expanded to include discussions about which type of feedback is more beneficial. Two key dichotomies have received significant attention in the literature: direct versus indirect feedback, and focused versus unfocused feedback.

1.15.1 Direct vs Indirect Feedback

According to Ferris (2011), direct feedback refers to when the teacher explicitly provides the correct linguistic form be it a word, morpheme, phrase, or a revised sentence. Students, in this case, are expected to incorporate the teacher's corrections without needing to discover the appropriate form themselves. In contrast, indirect feedback refers to when the teacher indicates the presence of an error without identifying or supplying the correct form to the student, leaving it to their own efforts to find the correct answer (Ferris, 2011). Research that compares the impact of direct and indirect corrective feedback have yielded mixed results. Some studies indicated the benefits of indirect feedback over the direct one. For example, Eslami (2014) reported that indirect feedback supports learner autonomy. As an evidence, Westmacott (2017), in a perception-based study, indicated that students valued indirect written corrective feedback (WCF) for encouraging self-reflection. However, more recent empirical studies report opposing findings as they found that direct WCF produced significantly better writing accuracy than indirect WCF (Khaki and Tabrizi, 2021; Mafulah and Basthomi, 2022). Nevertheless, Wondim et al (2024) showed that direct WCF when provided with metalinguistic explanations led to higher achievement than indirect feedback.

1.15.2 Focused vs Unfocused Feedback:

The two types are distinguished on the grounds of the number of error types the teacher chooses to correct. Focused feedback occurs when the teacher selects a limited number of specific

error types, i.e., articles or prepositions, and corrects only them. The purpose of such feedback is to help students to focus on particular grammatical issues and improve accuracy rather than being overwhelmed by too many corrections at once (Ferris, 2011). However, unfocused feedback pertains to correcting a wide range of errors without limiting the feedback to specific categories. The teacher provides feedback to every detected error on students' compositions (Nassaji & Kartchava, 2021). While some studies have shown that the positive effects of focused feedback can be more resilient than those of unfocused feedback, both have been reported to improve accuracy (Aliakbari et al., 2023). Colpitts and Howard (2018) also showed that unfocused teacher and peer CF can be more effective than focused CF in eradicating students' errors since it presents a broader range of learning opportunities. More specifically, Aghajanloo et al. (2016) argued that unfocused direct CF should be considered an essential component in developing the writing ability of intermediate EFL learners.

1.16 Modes of Feedback Provision

Written corrective feedback can be delivered in various ways, namely through teachers, peers, or technological tools such as automated writing evaluation systems.

1.16.1 Teacher feedback

Although writing instruction has shifted towards a more student-centered in process-oriented approach, teacher feedback remains an indispensable component of effective composition pedagogy. Their feedback is often considered the most influential stage in the writing process since teachers are not merely assessors but also facilitators and guides who support learners through drafting, revising, and reflecting on their writing (Hyland, 2003). Students themselves often appreciate and value this guidance particularly when it transcends mere grammatical correction to include concepts, organization, and clarity, or when it amalgamates encouragement with constructive criticism. (Ferris & Hedgcock, 2013). However, the effectiveness of a teacher's

feedback is not always guaranteed. While studies indicate that written corrective feedback can improve accuracy over time (Ferris & Kurzer, 2019; Bitchener, 2019), its success depends on students noticing, understanding, and using it. Research shows that teacher feedback can be vague, overly directive, or inconsistent, which may confuse students, diminish their sense of ownership, or even lower their confidence (Hyland, 2019). Additionally, some students may avoid writing or ignore the feedback due to feeling discouraged and face-threatened when faced with too many corrections. Moreover, the laborious nature of responding to student texts represents a major challenge for teachers because it often consumes more time than lesson planning or teaching itself (Ferris & Hedgcock, 2013). Therefore, more innovative modes of delivering WCF are being pursued to help alleviate the burden from teachers' shoulders.

1.16.2 Peer Feedback

The act of learners providing and receiving feedback from their peers on their composition drafts has become a common practice in second language (L2) writing classrooms (Storch, 2019). Its integration into L2 pedagogy can be traced to two major theoretical underpinnings. First, from the process approach to writing, peer response is viewed as a valuable intervention at any stage of the writing process, such as prewriting, planning, revision, and editing (Flower & Hayes, 1981; Liu & Hansen, 2002). Second, from a social constructivist perspective (Vygotsky), it is often discussed as a component of collaborative writing, in which co-authors share responsibility of the text and provide each other with immediate, context-specific feedback (Storch, 2019). Empirical studies have demonstrated various advantages of this type of feedback. Peer feedback helps in the refinement of the final drafts and improves the writing process (Paulus, 1999). It also promotes critical thinking, autonomy, and social interaction among learners (Yang et al., 2006).

However, Ferris and Hedgcock (2013) and Hyland (2019) identify common concerns regarding the effectiveness of peer feedback. Initially, learners limited rhetorical experience may cause them to focus excessively on surface-level errors rather than engaging with more significant issues such as organization and content. Furthermore, because peers lack formal teaching training, their feedback may be ambiguous, unconstructive, overly judgmental, or even erroneous; thus, it may potentially mislead writers and cause students to mistrust their classmates' recommendations. Additionally, cultural influences may affect peer responses, since some students may hesitate to criticize others to maintain group peace. Furthermore, stemming from low competency of some students' level, they fear of mockery and ridicule which leads them to generally prefer teachers' feedback.

1.16.3 Automated Feedback

With the continued dominance of English as the leading medium of international communication, there is a growing need for skilled writing education. The academic writing process poses significant challenges to students in higher education because it demands advanced cognitive skills that many individuals have not yet developed before their admission into their universities (Callies et al., 2013). Compared with first language students, second language learners face even greater difficulties in writing which makes feedback an essential element in their writing skill development (Eckstein & Ferris, 2018). Nevertheless, delivering feedback is often restrained in classroom settings due to time constraints, large class sizes and the unavailability of instructors' individual feedback (Shadiev & Feng, 2023). Accordingly, this often complicate the provision of detailed and consistent assessments of students' writing (Hyland, 2019). Furthermore, teacher and peer feedback may lack consistency due to human error and create confusion for learners (Parra & Calero, 2019). Even when feedback is provided, it is frequently delivered as error codes without

sufficient explanation which restricts students' ability to benefit fully from their teachers' feedback (Pham et al.,2022). Therefore, to overcome these limitations, scholars have emphasized the need for alternative approaches as possible support tools to traditional teacher feedback. AlAhdal (2020) emphasized the critical role of error analysis in the writing process and suggested that technological tools can augment its efficacy. Automated Writing Evaluation (AWE) technologies have been adopted as critical instruments for compensating for the limitations of traditional feedback procedures and overall L2 writing research quality. Studies have shown that Automated Writing Evaluation (AWE) systems have the ability to provide immediate, consistent, and detailed feedback to learners; thus, promoting accuracy and autonomy during the writing process as well as reducing the working load for teachers (Wilson & Czik, 2016; O'Neill and Russell, 2019; Park and Yang,2020)

1.17 Technology Integration

The rapid expansion of information and communication technologies (ICT) has transformed education in the twenty-first century and reshaped how learners interact with knowledge (Zein et al., 2025). Verma (2023) argues that ICTs provide the necessary tools through which information is stored, transmitted, and transformed into meaningful learning experiences, making the integration of technology in classrooms an indispensable procedure (Yadav, 2024). Students nowadays are highly tech-savvy (Ghavifekr et al 2012). They represent a generation of both “digital natives” who have been raised surrounded by technology, and “digital immigrants,” who encountered it later in life (Prensky 2001). This pervasive digital exposure has given rise to learners whose habits are shaped by constant connectivity and interactive platforms (Nasution et al., 2023). Students are now immersed in technology-rich environments that include social media platforms such as Facebook and Instagram, instant messaging apps like WhatsApp and Messenger, and online collaboration tools

like Google Docs and Zoom (Mpiti & Makena, 2022). To deal with this reality, teachers must modify their traditional methods so that teaching aligns with students' digital practices and evolving ways of learning. This change has made technology integration a cornerstone in preparing learners for participation in an information-driven society (Ghavifekr et al., 2012).

Technology integration, which refers to the purposeful incorporation of tools such as computers, mobile devices, online platforms, and digital applications into daily classroom practices, enhances the learning experience by making lessons more interesting, personalized and interactive (Wen & Walters, 2022; Angraini et al., 2024), while also encouraging learner autonomy and collaboration (Stanley, 2013). The COVID-19 pandemic has further accelerated these developments by encouraging the use of online learning platforms and revealing the potentials of technology in enabling and enhancing language acquisition (Jiang & Lu, 2022). In particular, it also drew greater attention to the use of digital feedback in L2 writing, demonstrating its value in supporting students' writing development during the shift to online education (Shang, 2022).

1.18 Technology And Writing Skill

To improve L2 writing instruction and enrich the overall learning experience, innovative teaching methods using the advancement of technology were proposed. Researchers have shown that the use of innovative digital tools would stimulate learners' interest and engagement and reshape the role of teacher and learner inside the classroom (Dancsa et al., 2023; Sinar et al., 2025). In response to these pedagogical demands, an increasing number of studies have examined the integration of diverse technological interventions into L2 writing instruction. For instance, Krishnapatria et al. (2019) used Google Maps in teaching recount text, arguing its potential impact on students' ability to visualize and describe their experience. Moreover, for collaborative writing and peer assessment, Lee (2016) suggested using Google Drive and wikis, respectively. Instant

messaging apps and mobile phones were also used such as WhatsApp which was considered an impactful tool in improving the writing performance (Tanashur et al., 2024b).

However, these technological tools are prone to noticeable limitations. Zhou et al. (2012) revealed that using Google Docs did not improve student performance as measured by assignment grades, and it was difficult to track each group member's contributions. Similarly, despite students showing strong interest and positive attitudes toward using WhatsApp for writing, the study by Noyan and Kocoglu (2019) found that it offered no significant performance advantage over the traditional pen and paper method, which was the only technique that led to progress across all measured writing components. Due to these limitations, the recent advancements in technology that is powered by Artificial Intelligence (AI) was further exploited in the writing instruction as they offer several advantages. According to Zhang (2023), AI tools make learning more engaging and personalized by giving students feedback that matches their needs and pace. It also saves time through automation of tasks like grading and error correction and encourages creativity by pushing learners to try new ideas and writing styles

1.19 Using Artificial Intelligence in Writing

Artificial intelligence (AI) refers the capacity of computer systems to imitate human cognitive abilities (Gifford, 2025b) in writing by generating content, correcting errors, and rephrasing or summarizing texts (Godwin-Jones, 2022). According to Shchaveleva et al. (2024b), AI-based tools can be broadly classified into two main categories, mainly: general-purpose tools and professional tools. Although general-purpose tools were not designed explicitly for teaching purposes, they could still be adapted to teaching contexts. They cover applications that are primarily designed for areas such as media and design. Examples of these tools include audio tools that generate music or convert text to speech, video tools that create animations or instructional clips,

and graphics tools that produce images or comics (Tolstykh & Oshchepkova, 2024). In contrast, professional tools are developed for certain domains like programming, and education. However, they are especially relevant to language teaching since these AI tools support text generation and translation (e.g., Google Translate, DeepL), assessment of writing, grammar, and pronunciation (e.g., Grammarly, SpeechAce), language tutoring through platforms and chatbots (e.g., Duolingo, TalkPal), and instructional planning (e.g., Magic School) (Shchhaveleva et al., 2024b).

Novawan et al., (2024) identify another classification of AI in educational settings that is based on the degree to which tools approximate human-like intelligence. Narrow AI, which is also called Weak AI, is task-specific that is designed to handle well-defined objectives, such as providing assessment in writing and pronunciation, or speech training. These tools excel at supporting language learning objectives without broader cognitive capacity. Within the context of language teaching and learning, this type includes tools like Automated Writing Evaluation (AWE) and Automated Error Detection (AED). On the other hand, strong AI seeks to replicate human cognition by offering versatile and highly personalized learning experiences. This includes a more advanced artificial intelligent technology, known as generative AI.

1.20 Generative AI in Writing Instruction

Generative Artificial Intelligence refers to AI systems that employ deep learning techniques to create new content (Bowen & Watson, 2024). ChatGPT, which was released on November 2022, is a prominent example of this technology and represents a major milestone in the evolution of AI (Yan, 2024). Developed by OpenAI, it is based on the Generative Pre-trained Transformer (GPT) series of Large Language Models (LLMs) (Bowen & Watson, 2024).

ChatGPT and other generative AI tools are very useful in the field of education and in EFL writing instruction. These tools enhance grammar and vocabulary learning through providing

grammar correction, vocabulary suggestion, and conversational practice (Baskara et al., 2024; Thorne, 2024). Additionally, generative AI develops learners' writing skills, including argumentative writing, critical thinking, and self-regulated learning (Woo et al., 2024; Yan, 2023; Darwin et al., 2024). Furthermore, they increase motivation (Gunawan & Susanto, 2025) and offer text-based features such as summarization, translation, and prompt-driven text generation (Dale, 2021).

However, regardless of the benefits that these generative AI tools offer, they cause a serious concern and a potential threat to the quality of language education. One major challenge that was voiced by several researchers is the tendency to produce inaccurate, repetitive, overly lengthy, or misleading feedback, which could potentially result in no significant improvement in writing skills (Xu & Zhang, 2022; Meniado, 2023). Additionally, they may jeopardize the academic integrity as AI tools may facilitate plagiarism by generating readymade content and undermining the concept of authorship; the text may no longer fully represent the learner's own ideas and style of writing (Alghasab, 2025). Another concern is the overreliance on AI, which eventually leads to cognitive offloading (Darwin et al., 2024). That is to say, learners' dependence on AI diminishes their independent writing ability, creativity, and critical thinking over time (Chen et al., 2020; Yan, 2023). Accordingly, it is important to note that most generative AI services were not originally created for educational purposes, which makes their integration into classroom practices more complex (Tolstykh & Oshchepkova, 2024b). In contrast, task-specific or weaker forms of AI, such as Automated Writing Evaluation (AWE) tools, are designed with a narrower educational focus; therefore, they reduce the abovementioned risks in the educational setting.

1.21 Definition of Automated Writing Evaluation Tools

Automated Writing Evaluation is a type of computer-based program that uses artificial intelligence, natural language processing (NLP), machine learning, deep learning algorithms, and statistical models to analyze learners' writing and provide scores or feedback (Ranalli et al., 2016; Stevenson & Phakiti, 2019). Despite initially being devoted to large-scale summative assessment through providing automated essay scoring, AWE tools have evolved into interactive systems that support the process of writing by offering immediate and formative assessment, thereby encouraging the active role of learners (Zhang & Hyland, 2018; Cotos, 2018). These tools evaluate writing skill components such as grammar, vocabulary, mechanics, organization, and discourse, with the aim to foster students' revision practices and improve writing skill quality (Baskara et al., 2024).

1.22 History of Automated Writing Evaluation Tools

Automated Writing Evaluation (AWE) first emerged in the 1960s with the development of the Project Essay Grade (PEG) system by Ellis Page, which tried to forecast teacher-graded ratings of essays by the examination of surface-level text features like length of the essay, mean length of the word, number of commas, number of prepositions, and number of rare words (Hearst, 2000). Although it reached relatively high correlations with human graders, PEG was severely criticized for the usage of indirect writing ability measures that ignored significant aspects like content, organization, and rhetorical patterns (Hearst, 2000; Liu & Kunnan, 2016)

In the early 1980s, the Writer's Workbench (WWB) became the next step toward the development of AWE tools. Unlike PEG, it was not designed to assign scores but to provide feedback that focused on spelling, diction, and readability for the purpose to offer learners with informative support (Hearst, 2000). Although it only focused on surface-level features, WWB was

one of the pioneering efforts toward formative rather than summative applications of automated writing technology.

As Cotos (2018) reports, by the 1990s, advances in computer technology, natural language processing (NLP), and information retrieval (IR) paved the way for the development of more advanced Automated Essay Scoring (AES) engines. The decade witnessed the innovation of programs such as e-rater (Educational Testing Service), and Intelligent Essay Assessor (IEA) (Pearson), and Intellimetric (Vantage Learning). They were implemented within high-stakes standardized testing situations like the TOEFL iBT, Pearson Test of English (PTE), and Graduate Management Admission Test (GMAT), where they offered immediate, consistent, and cost-effective scoring (Hearst, 2000).

Over time, AES systems evolved from being limited to holistic scoring in high-stakes testing to becoming classroom-oriented AWE tools that provide formative feedback on grammar, mechanics, usage, style, and content (Liu & Kunnan, 2016). Among the most widely used examples are Criterion, WriteToLearn, and MyAccess, which are derivatives of e-rater, IEA, and Intellimetric, but are described as institutional products available only through institutional purchase (Allen et al., 2016). An expanding diversity of commercially focused tools is available to individual users, including Grammarly, PaperRater, and Write and Improve, which are often offered with a limited free access and a paid version for additional features (Strobl et al., 2019; Deeva et al., 2022). Recently, AWE has further progressed after integrating AI, natural language processing, corpus linguistics, and advanced algorithms. This allowed systems to transcend mere error detection to assess content, argument structure, and rhetorical patterns (Godwin-Jones, 2018).

1.23 Previous Studies on Automated Writing Evaluation Tools

After reviewing the literature, the studies concerning the overall impact of Automated Writing Evaluation tools on students' writing performance has yielded mixed results. A considerable body of research has revealed promising benefits of these tools; however, notable drawbacks were also highlighted. Therefore, to reach a consensus and clarify the effectiveness of AWE, more studies ought to be conducted.

To begin with, one area in which automated feedback technology has been shown to enhance and influence significantly is the accuracy of learners' written production. According to Guo et al. (2023), AWE has accelerated the feedback process, which is beneficial for enhancing writing ability. Li et al. (2016) confirmed that AWE improves grammatical and mechanical accuracy by immediately detecting errors and providing suggestions for accurate corrections. Furthermore, Waer (2021) found that students performed significantly better in grammatical knowledge after receiving automated feedback. Moreover, Burstein et al. (2016), Chen et al. (2022), and Barrot (2023) stated that AWE systems have improved students' ability to identify lower-level errors such as capitalization and punctuation and that learners became more attentive to grammatical errors, thereby, ultimately developing stronger writing skills.

In addition to grammar, research has emphasized the significant role of AWE in enhancing vocabulary and lexical richness, since these tools not only identify errors but also provide tailored suggestions for more appropriate word choice. Luo and Liu (2017) demonstrated that vocabulary proficiency improved when learners used automated feedback. In the same vein, Dizon and Gayed (2021) confirmed that learners invested more effort in refining word choice; therefore, it resulted in richer and more precise written expression. Beyond accuracy at the linguistic level, AWE has also been credited with enhancing textual quality. Crossley et al. (2016) reported that automated feedback

improved cohesion and coherence in student writing. Likewise, Sinar et al. (2025) contended that AWE tools like Slick Write enhance the development and organization of ideas.

Nonetheless, numerous constraints have also been identified. Studies suggest that Grammarly often produces feedback that is inaccurate, unnecessary, or contextually inappropriate, which can frustrate learners and undermine their confidence (Dembsey, 2017; Woodworth & Barkaoui, 2020). Because Grammarly does not provide feedback explanation, learners often perceive such feedback as less trustworthy than teacher comments; thus, they find it overwhelming, demotivating, or difficult to understand, especially among lower-level EFL student (Im, 2021; Miranty & Widiati, 2021). However, it is important to recognize that such limitations are primarily associated with Grammarly, one of the most commercially promoted AWE platforms, rather than with AWE technology as a whole. Other automated feedback systems have been designed specifically for classroom integration and instructional support, offering functions that go beyond surface-level correction. Virtual Writing Tutor (VWT), for example, enhances linguistic accuracy by detecting spelling, grammar, punctuation, and vocabulary errors (Al Badi et al., 2020) and provides more extensive feedback on lower-level issues such as capitalization and formatting compared to teachers (Zein et al., 2025). Its capacity to deliver immediate, personalized, and detailed feedback helps students notice and understand errors, with features such as praises and queries drawing more attention than traditional teacher comments (Chen et al., 2024). Empirical evidence further shows that consistent use of VWT significantly improves writing performance in scientific and argumentative texts as experimental group participants outperformed their peers in the control group who do not have access to the tool (Viantika & Dangin, 2024).

AWE is recognized for its ability to promote learner autonomy and self-assessment, which encourages students to foster their independence and take responsibility for their revisions (Liao,

2016; Moore & Macarthur, 2016; Chen & Cui, 2022; Fu et al., 2022; Barrot, 2023). Zhang and Zhang (2022), however, emphasized that automated feedback could lead students to become excessively dependent on the recommendations offered by AWE technologies and adopt a more passive learning approach. Consequently, learners may concentrate exclusively on superficial corrections, neglecting the development of more important metacognitive skills like selective attention or self-monitoring. This may impede their capacity to critically evaluate their own writing, to restrict their autonomy in making independent revisions, and to reduce their opportunities for long-term writing development.

In addition, Brummelman et al. (2014) found that students' motivation and self-esteem were ultimately improved because AWE tools offered more praise than teachers did. Furthermore, Sun and Fan (2022) revealed that using AWE tools can reduce avoidance behaviors and anxiety among students. Yet, other evidence suggests that automated feedback does not consistently improve motivation or engagement. For example, the results of Kim & Song (2024b) showed no significant changes in students' motivation or interest in English writing after using AWE.

Finally, from the teacher's perspective, automated systems are viewed to reduce workload and free instructors from the heavy burden of delivering detailed feedback on students' drafts since it is time consuming in large classes size (Shadiev & Feng, 2024). However, some educators argue that writing is a human and creative act that cannot be fully captured by computer formulas or algorithms. They believe that When students rely too much on automated systems, by focusing mainly on grammar and mechanics, they overlook the broader purposes of writing including expressing ideas and persuading audience (Cotos, 2018). To address these concerns, recent research has emphasized the benefits of combining AWE with teacher feedback instead of using automated systems as a replacement. (Huawei & Aryadoust, 2023; Thi & Nikolov, 2022). This hybrid approach

facilitates a division of labor and maximizes the strengths of both approaches (Chen and Pan, 2022; Zhang and Hyland, 2022). Automated systems in this regard would efficiently handle lower-order issues such as grammar, spelling, punctuation, and sentence structure while teachers can concentrate on higher-order aspects of writing, including idea development, organization, coherence, argumentation, and rhetorical effectiveness (Mohammadi et al. (2023). Nevertheless, empirical research on automated writing evaluation (AWE) has grown in recent years, but most studies have focused on machine-generated feedback alone. As a result, the effect of AWE in conjunction with teacher feedback remains underexplored, indicating the need for further research (Kawashima, 2023).

From a sociocultural perspective, AWE systems serve as a mediational tool that enables learners to progress within their Zone of Proximal Development (ZPD) (Woodworth & Barkaoui, 2020). Through providing learners with tailored feedback that is suitable for their current level of proficiency, these systems create developmentally appropriate scaffolding (Alghasab, 2025). This allows them to bridge the gap between their existing abilities and a more advanced performance which they would not be able to reach individually, especially with the absence of teachers and peers. AWE expands on Vygotsky's (1978) idea of socially supported learning by offering what Song and Song (2023) call solo interaction, in which learners receive direct, individualized feedback even when working independently on their own.

Furthermore, it is paramount to understand learners' perceptions of AWE feedback, as they directly influence students' engagement, motivation, and willingness to apply the automated feedback for improving writing (Liu,2024). Bitchener (2021) suggests two broad categories of factors that shape this engagement, including internal factors and external factors. Internal factors encompass the degree of trust or distrust students place in the provided feedback, the motivation of

learners to improve writing, the language proficiency, and the learners' attitudes towards AWE feedback. External factors on the other hand, relate to the qualities of the system itself such as the accuracy, explicitness, and ease of use of the feedback. In this regard, the Technology Acceptance Model (TAM), which was developed by Davis (1989), explains the users' acceptance of technology through two key factors: perceived usefulness and perceived ease of use. These factors influence the users' attitudes towards the technology, which in turn shape their behavioral intention to use it, and ultimately, their actual use of the system. A systematic review by Shadieff and Feng (2024) of studies conducted between 2016 and 2022 found that a large majority of studies (77.14%) reported positive students' perceptions of AWE tools, while 22.86% of the reviewed studies expressed mixed perceptions, demonstrating both benefits and limitations.

Similarly, additional studies beyond this review have also reported mixed results. El Ebyary and Windeatt (2010) conducted research in Egypt and found that the computer-based feedback that is provided by Criterion supports writing development, which shaped learners' positive perceptions of its use. Likewise, Parra and Calero (2019), Moussalli & Cardoso (2020), Wang et al. (2022) from Ecuador reported that learners perceived Grammarly and Grammarly as useful since they improved students' writing performance. Other studies demonstrated mixed results. For instance, Colin (2020) in Japan and Nunes (2019) in Brazil both indicated that despite the fact that participants found Write & Improve to be easy to use, students felt frustrated due to the inappropriate and insufficient feedback provided by the tool, which resulted in them questioning its overall effectiveness. Likewise, Kim & Son (2024) reported that AI grammar checkers were viewed positively by Korean students due to their accuracy in detecting grammar errors, ease of use, and provision of clear feedback that supports self-directed learning. At the same time, participants of the same study reported that these tools did not significantly enhance their motivation, interest in writing, or provide

sufficiently detailed feedback, highlighting an ongoing reliance on teacher input for more comprehensive writing support.

Additionally negative perceptions were also identified. In the United States, Laura et al. (2017) reported that high school students held negative views of Writing Pal, as its feedback was restricted to lower-level concerns such as spelling and grammar, which did not meet learners' expectations for more substantive guidance. Wilken (2016) investigated ESL learners' perceptions toward the utilization of Criterion in an Intensive English Program (IEP) class. All participants felt that its feedback was difficult and vague.

1.24 Rational for Conducting the Study

Although Automated Writing Evaluation (AWE) systems have become increasingly eminent in second language (L2) classrooms, research on their effectiveness and on learners' perceptions remains insufficient and inconclusive, as previous studies have yielded mixed results. Much of the existing research has relied heavily on experimental designs with relatively few mixed-methods studies that examine not only the measurable impact of AWE on writing performance but also students' perceptions of these tools. This is evident in the systematic review of Shadiev and Feng (2024). They confirm that only 13.41% of the studies on AWE tools used mixed method research design compared to 62.20% that used experimental design and 23.17% that implemented case studies. Furthermore, prior investigations have tended to focus on a narrow set of platforms; they mainly integrated Grammarly, Pigai, and Criterion. This limited set of AWE tools restricts the generalizability of findings and restrain the understanding of the broader potential of AWE systems.

Moreover, within the Algerian context, research about such AI technology remains scarce, which leaves the influence of diverse cultural and institutional conditions unexplored. A study, however, conducted by Bouabdallah and Mehdi (2024) examined teachers' perceptions of AWE.

They revealed that teachers from Mohammed Lamine Debaghine University hold positive perceptions of these tools since they viewed them as valuable additions to instruction and capable of assessing multiple aspects of writing. Therefore; they recommended the integration of AWE in classroom practices and test their effectiveness on Algerian students. Accordingly, the current study aims at investigating the impact of Automated Writing Evaluation tools on students' writing skill and viewing their perceptions of the integration of such tools.

Conclusion

From reviewing the literature, the pivotal role of writing in language learning was highlighted, as well as its complex nature and the various approaches used in teaching it. The discussion also showed that while writing is essential for academic success, it remains one of the most challenging skills for EFL learners, who often struggle with different types of errors stemming from linguistic, instructional, and contextual factors. Feedback was recognized as a crucial means of supporting students' writing development, yet often limited in traditional contexts. In recent years, technology has increasingly been integrated into writing instruction, with Automated Writing Evaluation (AWE) tools emerging as a promising form of feedback provision. However, despite the growing global interest in AWE, a noticeable gap remains in its empirical investigation within the Algerian context. This lack of studies on the use of such tools to improve students' writing skills provides the rationale for the present research. Therefore, this study aims to explore the impact of AWE on EFL learners' writing performance and examine its potential as a pedagogical tool in Algerian higher education. The following chapter will present the research methodology designed to address these objectives.

Chapter two: Research Methodology	65
Introduction	65
2.1 Research Questions and Hypotheses	65
2.1.1 Research Questions	65
2.1.2 Research Hypotheses	66
2.2 Research Paradigm	66
2.2.1 Beliefs Shaping Research Paradigms:	67
2.2.2 Types of Paradigms:	69
2.2.3 Paradigm selected for the study	71
2.3 Research Approach	72
2.3.1 Quantitative approach	72
2.3.2 Qualitative approach	72
2.3.3 Mixed methods approach	73
2.3.4 Approach selected for the study	74
2.4 Research design	75
2.4.1 Mixed methods experimental design	76
2.4.2 Experimental Design	77
2.5 Research Population and Sampling	80
2.5.1 Research population	81
2.5.2 Participants:	81
2.5.3 Sampling	83
2.5.4 Study context:	86
2.5.5 Students Learning Profile:	88
2.6 Data Collection Phases and Research Instrumentation:	90
2.6.1 Exploratory Phase and Research Instrumentation:	90
2.6.2 Pre- Experimental phase and Research Instrumentation:	93
2.6.3 Experimental Phase and Research Instrumentation:	94
2.6.4 Post-Experimental phase and Research Instrumentation:	107
2.7 Administration of the instruments:	116
2.7.1 Students' preliminary questionnaire:	116
2.7.2 Teachers' preliminary questionnaire:	116
2.7.3 Placement test:	117

2.7.4	Pre-test:	117
2.7.5	Progress test:	118
2.7.6	Post test:	118
2.7.7	Post treatment questionnaire:	119
2.7.8	Post treatment interview:	119
2.8	The experiment	120
2.8.1	Virtual Writing Tutor Choice Rational:	120
2.8.2	The implementation of the treatment:	123
2.8.3	Structure of the treatment:	124
2.9	Data Analysis procedures:	126
2.9.1	Analysis of Quantitative Data	127
2.9.2	Analysis of Qualitative Data:	129
2.9.3	Analysis of Paragraph Corpus:	130
2.10	Ethical considerations:	130
2.11	Limitations of the study	131
2.12	Delimitations of the Study	131
Conclusion		

Chapter two: Research Methodology

Introduction

Finding a solution to a problem and achieving accurate results and comprehensible conclusions is only possible through the appropriate research methodology. The latter represents the steps a researcher needs to follow in quest of appropriately answering research questions and undertaking research endeavors with confidence (Kumar 2011). Thus, this chapter starts with re-introducing the research questions and hypothesis. Then it moves to thoroughly explain and portray the adopted research design. Thereafter, the participants of this study along with the sampling techniques are described. Moreover, this chapter provides a description of research procedures in addition to the development, piloting, and administration of the research instruments. Finally, data collection, instruments, validity and reliability issues, ethical considerations, and study limitations are presented.

2.1 Research Questions and Hypotheses

The research questions and hypotheses are presented due to their importance at determining the methodological frameworks of the study.

2.1.1 *Research Questions*

The present study aims at answering the following research questions:

RQ1. What are the effects of Automated Writing Evaluation technology on Mohammad Lamine Debaghine second-year EFL students' writing skills?

RQ2. What writing aspect(s) has developed more after the integration of Automated Writing Evaluation technology?

RQ3. What are the perceptions of Mohamed Lamine Debaghine second-year EFL students towards integrating Automated Writing Evaluation technology to improve writing skills.?

2.1.2 Research Hypotheses

The following hypotheses are aimed to be tested in order to answer the above-mentioned research questions.

2.1.2.1 Null hypothesis

Second-year students of Mohamed Lamine Debaghine University who receive exposure to Automated Writing Evaluation technology will **not** significantly develop better writing skills than students who do not receive such exposure to any machine learning technology.

2.1.2.2 Alternative hypothesis

Second-year students of Mohamed Lamine Debaghine University who receive exposure to Automated Writing Evaluation technology will significantly develop better writing skills than students who do not receive such exposure to any machine learning technology.

2.2 Research Paradigm

Curiosity and desire to achieve the unknown is an idiosyncratic quality of human nature. It is only indulged through thorough investigation and research of intriguing observed phenomena. However, this research is not conducted haphazardly, rather through a systematic rigorous process in which it generates knowledge and further insights to obtain answers for the solicitous mind. Research aims to collect, analyze, interpret, and use data for various purposes, such as understanding, describing, or controlling educational and psychological phenomena (Mertens, 2019c). This systematic approach to research is guided by various research paradigms, which

provide the frameworks for how studies are conducted, how data is interpreted, and how knowledge is generated and applied (Mertens, 2019c). A research paradigm shapes the researcher's worldview and reflects philosophical assumptions about reality and knowledge. These assumptions influence researchers' methodological choices and guide whether research is approached quantitatively, qualitatively, or both, through mixed method approach (Khatri, 2020).

2.2.1 Beliefs Shaping Research Paradigms:

Accordingly, Guba and Lincoln (2005) outline four fundamental belief systems that help define a paradigm through the following questions:

1. The ontological question explores, “What is the nature of reality?”
2. The axiological question addresses, “What is the nature of values and ethics?”
3. The epistemological question examines, “What is the nature of knowledge and the relationship between the knower and the known?”
4. The methodological question considers, “What is the nature of systematic inquiry, and how can one effectively obtain the desired knowledge and understanding?”

Similarly, Handema et al. (2023) states some of the major philosophies in research that shape researcher assumptions:

First, “Ontology” deals with what is real in social research (Saunders et al., 2009). The objective Realist ontology argues that reality exists independently outside the researcher's mind. Researchers should aim to discover this single shared reality using consistent methods. In contrast, Nominalist ontology, from a subjective standpoint, believes that reality is shaped by individual

perceptions. This view supports using flexible methods to understand these multiple realities. These assumptions about reality are crucial for understanding the nature of the data collected.

Second, “Epistemology” is the study of knowledge of how individuals understand and validate what they know (Bell et al. 2022). Handema et al. (2023) highlight two key perspectives: the objective worldview, linked to positivist epistemology, and the subjective worldview, linked to humanistic epistemology. Positivist researchers, who adhere to a realist ontology, argue that knowledge is derived from sensory experiences, meaning that reality can be discerned through our senses. In contrast, humanistic epistemology researchers, who adhere to nominalist ontology, view knowledge as socially construction and interpretation as reality is shaped by social interactions.

Third, “Axiology” is about understanding how values and beliefs impact research (Cohen et al., 2018). It affects knowledge generation by recognizing that personal and social values shape research. Objective phenomena are seen to have inherent value, while the value of subjective phenomena depends on individual perspectives. An objective approach aims for neutrality, while a subjective approach incorporates the values of those involved. Axiology ensures that research aligns with moral and societal standards (Killam, L., 2013) and guides researchers in making ethical choices and maintaining integrity throughout the research process (Paulinus & David, 2013)

Finally, “Methodology”, according to Mackenzie and Knipe (2006), is a systematic approach that guides the research process in a rigorous, logical, and ethical way, leading to valid and reliable results. It helps researchers define objectives, formulate research questions, and select appropriate methods. A well-constructed methodology addresses ethical considerations, protecting participants' rights and privacy, and informs evidence-based practices and policymaking. It ensures research is transparent, well-founded, and open to evaluation, contributing to both theoretical understanding and practical applications (Khan et al., 2023).

2.2.2 Types of Paradigms:

In essence, ontological assumptions lead to epistemological assumptions, which subsequently influence methodological considerations, and these, in turn, impact the choice of instruments and data collection methods. Therefore, these philosophical assumptions are all interconnected in a sequential chain and contribute to defining a paradigm. The core principle guiding research should be "fitness for purpose," as different research paradigms are best suited to different research objectives (Cohen et al., 2002). Mertens (2019c) lists four major paradigms, as shown in Figure 2.1. explaining the fundamental beliefs related to each paradigm.

Figure 2.1

Types of paradigms and their related beliefs

Basic Beliefs	Postpositivism	Constructivism	Transformative	Pragmatic ^a
Axiology (nature of ethical behavior)	Respect privacy; informed consent; minimize harm (beneficence); justice/ equal opportunity	Balanced representation of views; raise participants' awareness; community rapport	Respect for cultural norms; beneficence is defined in terms of the promotion of human rights and increase in social justice; reciprocity	Gain knowledge in pursuit of desired ends as influenced by the researcher's values and politics
Ontology (nature of reality)	One reality; knowable within a specified level of probability	Multiple, socially constructed realities	Rejects cultural relativism; recognizes that various versions of reality are based on social positioning; conscious recognition of consequences of privileging versions of reality	Asserts that there is a single reality and that all individuals have their own unique interpretation of reality
Epistemology (nature of knowledge; relation between knower and would-be known)	Objectivity is important; the researcher manipulates and observes in a dispassionate, objective manner	Interactive link between researcher and participants; values are made explicit; create findings	Interactive link between researcher and participants; knowledge is socially and historically situated; need to address issues of power and trust	Relationships in research are determined by what the researcher deems as appropriate to that particular study
Methodology (approach to systematic inquiry)	Quantitative (primarily); interventionist; decontextualized; mixes methods with quantitative approaches dominant	Qualitative (primarily); hermeneutical; dialectical; contextual factors are described; mixes methods with qualitative approaches dominant	Qualitative (dialogic), but quantitative and mixed methods can be used; contextual and historical factors are described, especially as they relate to oppression	Match methods to specific questions and purposes of research; mixed methods typically used

Note. Figure 2.1 is adopted from Mertins (2019c)

2.2.2.1 Post-positivism paradigm.

First, the evolution from positivism to post-positivism in educational and psychological inquiry constitutes a paradigm shift in the orientation of research. In positivism, one assumes that there is one singular true view that is free from prejudice and that can be retrieved and analyzed empirically. The approach has been criticized because it doesn't capture the complexity of human behavior. Post-positivism therefore accepts that there is an objective reality. This reality may not always be available to the researcher or might not completely be understandable through a subjectivist view. Considering the epistemological dimension, post-positivists argue that there is some bias to the findings, in that the researchers themselves constitute part of the research, but the scientists make efforts towards more objectivity of the results using methods such as collecting data through experiments and surveys, manipulating data, and minimizing biases. From an axiological perspective, post-positivism emphasizes ethical principles such as beneficence, respect, and justice to protect research participants. Methodologically, it often employs quasi-experimental designs to adapt scientific methods for social research, integrating both quantitative and qualitative approaches for a more comprehensive understanding of social phenomena.

2.2.2.2 Constructivist Paradigm:

Second, the constructivist paradigm challenges post-positivism's assumptions and methodology. Ontologically, constructivists believe in the existence of various realities shaped by social interactions, which might alter throughout the course of a study. In terms of axiology, they follow ethical principles but reject the idea of complete researcher neutrality, acknowledging that personal values and perspectives are inevitably involved. Moreover, constructivists emphasize "confirmability" over objectivity which means ensuring that the findings and interpretations are grounded in the actual context and experiences of the people involved in the research.

Methodologically, constructivist research primarily uses qualitative methods, such as interviews and observations in order to explore multiple perspectives often in a form of longitudinal studies.

2.2.2.3 Pragmatic paradigm

The pragmatic paradigm views reality as singular but acknowledges that individuals perceive and interpret it in their own unique ways. From an epistemological perspective, the nature of knowledge is shaped by the researcher's decisions regarding what is most suitable for a given study. Axiologically, pragmatic paradigm permits the pursuit of knowledge with the researcher's values and practical goals. It allows the personal and political influences to shape the research process. Methodologically, this paradigm emphasizes flexibility in selecting research approaches that best fit the specific objectives of the study, often integrating both qualitative and quantitative methods.

2.2.3 *Paradigm selected for the study*

The current probe aligns with the premises of the post-positivist paradigm for a number of reasons. Ontologically, the research is based on the assumption that an objective reality exists, namely, the effect of the automated writing evaluation tool on writing skills, but acknowledges that this reality can only be understood with a certain degree of probability. Epistemologically, objectivity achieved through experimental methods to measure the impact of the tool, but it is also complemented by questionnaires and interviews to capture students' perspectives. Axiologically, ethical principles such participants' privacy and consent are applied to ensure integrity in this research. Methodologically, the mixed methods approach in this study considers the quantitative data that is derived from the treatment tests as the primary and dominant source of data collection, while the qualitative data, which is derived from questionnaires and interviews, as supplementary evidence to understand the influence of human nature on writing skill.

2.3 Research Approach

The worldview and the assumptions of research paradigms directly influence the choice of research approaches (Mertens 2019c). The research approaches are the overarching strategy and plan that guides how research is designed and conducted to align with the research objectives and questions (Creswell & Creswell, 2022b). There exist three main approaches in the realm of research.

2.3.1 Quantitative approach

A quantitative approach focuses on numerical data to identify relationships between variables (Phakiti, 2014). Research in this approach typically aims for generalizability of the findings through random sampling, which helps avoiding bias. Data collection methods are rigorous and often pre-planned to ensure the validity and reliability of the instruments. Standardized instruments including tests, scales, and closed-ended questionnaires are used to maintain control and ensure accuracy and generalizability of the results (Lodico et al., 2010).

Data analysis in quantitative research is statistical. It is grounded in the belief of the positivist paradigm, which assumes the existence of one single reality that can be numerically described (Lodico et al., 2010). Common types of quantitative research include experimental and correlational research (Phakiti, 2014). Experimental research is often valued for its ability to determine cause effect relationship. By manipulating independent variable (e.g., automated feedback evaluation tools) on the dependent variable (e.g., writing skills), the researcher can draw definite conclusions about how a specific intervention causes change in the measured results.

2.3.2 Qualitative approach

The qualitative approach stems from the premises of the constructivist paradigm in believing that reality (e.g., human behaviors, including learning and thinking in educational research) is shaped by social and cultural context (Phakiti, 2014). Instead of generalizing the findings, the primary goal

of qualitative research is to provide an in-depth and rich detailed explanation of the subject under study in a natural setting and unique context.

Qualitative approach is an interpretive process that helps understand the world from the researcher's lessons and observations (Lodico et al., 2010). Researchers adopt a subjective approach to gain deeper insights without attempting to control the research setting or participants (Phakiti, 2014). Focused group and in-depth interviews with open-ended questions are the commonly employed data collection instruments in these studies. The qualitative approach often uses purposeful sampling of individuals with relevant knowledge and experience. It focuses on the subjective evaluation of their attitudes, opinions, and perceptions and interpreting the meaning that these individuals provide (Kothari, 2004).

2.3.3 Mixed methods approach

The mixed method approach to inquiry integrates both qualitative and quantitative methods in designing, collecting, analyzing, and interpreting data within the same study (Mertens, 2019c). This approach emerged as researchers recognized the limitations of merely relying on either qualitative or quantitative approaches. By combining both methods, it minimizes biases and weaknesses inherent in each form of data which leads to more balanced and insightful findings (Creswell & Creswell, 2022b). A mixed methods design is beneficial when a single approach fails to fully address the complexity of a research problem. This approach increases the strengths of both methodologies, making it valuable for answering intricate research questions that cannot be effectively explored through a single method alone (Creswell & Creswell, 2022b), Mertens, 2019c)

Additionally, it allows researchers to refine and expand their findings by creating connections between different types of data, ultimately enriching the depth of results (Mertens, 2019c; Phakiti, 2014). Moreover, according to Mehris, mixed methods research enhances

researchers' ability to compare results, explore intervention effectiveness, and analyze dynamic changes in outcomes, ultimately increasing the reliability of the study (Creswell & Creswell, 2022b). This approach strengthens the understanding of a research problem by integrating quantitative and qualitative data. It helps explain numerical results with qualitative insights, making findings more meaningful. Additionally, incorporating participant feedback improves research tools such as surveys and measurement scales. This approach also enhances experiments by including individual perspectives, leading to more comprehensive conclusions.

However, the simple distinction of combining a single quantitative method, such as a questionnaire, with qualitative data, like a focus group interview, within a study was not sufficient for researchers. As the understanding of the mixed-methods approach expanded, more sophisticated and complex designs emerged. (Mertens (2019c). Although the pragmatic paradigm was the foundation of the mixed-methods approach, other worldviews also influenced decisions about incorporating mixed methods within different research paradigms. Thus, according to (Creswell & Creswell (2022b) the traditional perspective of treating research approaches as opposing dichotomies should be replaced with the idea that a study can be more quantitative or more qualitative, depending on the extent to which both approaches are integrated. Accordingly, Phakiti, (2014) states that despite that experimental research is regarded traditionally as quantitative, a hybrid approach to inquiry was sought within this research to have a deeper understanding of the interrelationship between the variables. Thus, this mixed method approach to experimental research adopts a mixed methods design for inquiry.

2.3.4 Approach selected for the study

The current research selected the mixed methods approach as a blueprint and a benchmark for conducting the study. The rationale behind this choice lies within the research purpose and the

research paradigm chosen for the study. Following the postpositivist paradigm entailed choosing a mixed method methodology to collect the desired data. Thus, relying solely on the inferential statistics derived from the quantitative data was deemed insufficient for the research. Viewing students' perspectives about the use of Automated Writing Evaluation tools to improve their writing skill was explored through the derived qualitative data from the post-treatment interview. This analysis elucidates meaning and offers an understanding of the obtained scores from the pre-tests and post-test data.

2.4 Research design

The research design is a type of inquiry that lies within prominent research approaches, namely qualitative, quantitative, and mixed methods. These significant approaches provide informed orientations for research designs to apply their procedures and processes (Creswell & Creswell, 2022b). Each approach has its own specific research designs. The current study selected mixed method approach; thus, its designs are the main focus of the study.

Traditionally, there are three research core designs for the mixed methods approach including: the convergent parallel design, the explanatory sequential design, and the exploratory sequential design. Creswell & Creswell (2022b) indicate that convergent parallel design involves the simultaneous collection of both quantitative and qualitative data and then comparing or merging them in order to draw conclusions. The researcher then integrates the findings to address discrepancies or inconsistencies that may arise. Explanatory Sequential design starts with quantitative data collection, followed by qualitative research to further explain the findings. Exploratory Sequential design initiates with the collection of qualitative data to explore views to guide the quantitative phase.

However, with more sophisticated research problems, more advanced designs within the mixed-method approach have emerged. (Mertens, 2019c). Creswell refers to these new mixed-method designs as complex designs due to their layered nature. They integrate a design within a more prominent framework or another design creating a complex structure. (Creswell & Creswell, 2022b). In such intersected designs a notion of dominant or less dominant is perceptible. (Mertens, 2019c) In this case, a study tends to be either more quantitative or more qualitative. The choice lies within the paradigm and worldview of the study.

2.4.1 Mixed methods experimental design

This design is an example of the emerging complex designs. It is a reformative attempt to integrate qualitative data within the process of experimental research, following the premises and assumptions of the postpositivist paradigm (Creswell & Creswell, 2022b) According Mertens (2019c):

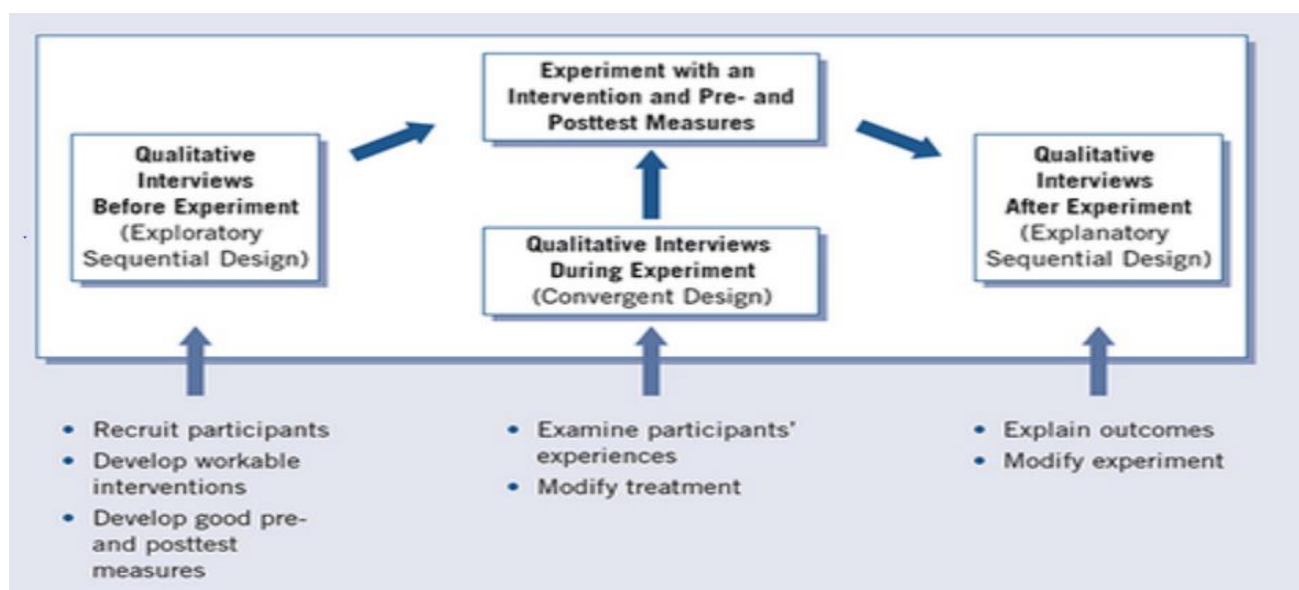
Mixed methods designs framed with the postpositivist paradigm follow the assumptions of that paradigm. The quantitative part of the study tends to dominate, and the use of randomized control trials or quasi-experimental designs are common. The major focus is on answering the question about causality in terms of an independent variable causing changes in a dependent variable. Qualitative data is used to answer different types of questions, and these data tend to be given a lesser role in the study. (p:325)

Adding the personal experiences of the participants, the qualitative data supports the pretest and post-test data collection (Creswell & Creswell, 2022b) The qualitative data embedded within the experiment design can be added sequentially or in a parallel way, depending on which stage of the experiment process the data was integrated within. Figure 2.2 explains that if the data was added for exploratory reasons before the intervention or added for explanatory reasons after the

intervention, it is then labelled as the sequential core design. However, if the qualitative data was implemented during the experiment, it is then labelled as convergent design.

Figure 2.2

Mixed methods experimental design



Note. Figure 2.2 is Adopted from (Creswell & Creswell, 2022b)

Therefore, the rationale behind choosing this design lies within the aim of the current research in investigating both the impact of the automated feedback evaluation tool on students' writing skills through the pretest and post-test scores and the student's perceptions and attitudes towards the intervention of the tool. The data is collected after the treatment; thus, this postpositivist mixed method design incorporated the exploratory sequential design as a core design within the complex design of experimental mixed method design.

2.4.2 Experimental Design

The experimental design, which belongs to the positivist paradigm, attempts to test the cause-effect relationship between the variables, an independent and a dependent variable (Bhattacharjee,

2012). The cause-effect relationship is tested in a controlled setting through administering the cause to one group of participants (treatment group) but not to the other group (control group). Then, the relationship is derived through observing the effects of the cause and how it varies between both groups. Accordingly, the present study manipulates the integration of automated writing evaluation technology, which is the independent variable and attempts to measure its impact on the writing skill within second year EFL students, which in turn is considered the dependent variable.

There are four major types of experimental design. According to Cash et al. (2016), these types are: true-experimental design, quasi-experimental design, ex-post facto design and factorial design. True-experimental design and quasi-experimental design are the most common ones in the area of educational research, They differ from each other based on the presence or the absence of random selection and assignment of participants to groups.

2.4.2.1 Quasi-experimental Design

As already mentioned, true-experimental design entails a random selection of participants. If this condition is absent, the researcher ought to select a quasi- experimental design. According to Creswell (2014) "In education, many experimental situations occur in which researchers need to use intact groups. This might happen because of the unavailability of the participants or because the setting prohibits forming artificial groups." (p.309). In this case the investigator uses control and experimental groups but does not randomly assign participants to them. Accordingly, the researcher in the present study was not able to take the whole populations as a sample due the large number of students and could not randomly assign the students to either the experimental group or control group since the study is conducted in an institutional environment where students are already assigned to predetermined groups with different time tables. Therefore, quasi-experimental design was chosen as the main design within the experimental mixed method design.

2.4.2.1.1 *Main Threats to Internal Validity in Quasi-experimental Design*

The selection of this design raises two issues. First, the external validity is threatened since the random sampling is absent; students do not have equal chances to participate in the research. Thus, the findings of this research cannot be generalized to the entire sample. Second, the inability to arbitrarily assign the participants to either the control or experimental group threatens the equivalence and the homogeneity of the two groups. Therefore, the internal validity and truthfulness of the results can be questioned. In other words, are the differences found between both groups due to the treatment, or are they the result of a confounding variable such as the initial non-equivalence of the groups themselves? Accordingly, the current study is considered non-equivalent group design.

According to Lodico et al. (2010), the main threats to internal validity in such designs are:

- **History:** It refers to the participants' background knowledge and experiences. Different histories might become a variable that competes with the treatment in generating results.
- **Maturation:** It is a threat that entails a certain developmental change that could occur with students during the experimental period.
- **Testing:** In a pre-post-test design, the pre-test might direct the participants' attention to the target forms. In addition, using identical pre- and post-tests ensures their equivalence but generates the risk of memorizing the test-items by the participants.
- **Instrumentation:** It refers to results being misleading when the differences between pre-test and post-test scores are caused by unequal test difficulty rather than by the treatment itself.
- **Differential selection of subjects:** It is a threat about a potential difference between the characteristics of the experimental and control groups.

2.4.2.1.2 *Measures Taken to Minimise Main Threats to Internal Validity*

- **History:** As an attempt to reduce this threat, the same content lessons following the process approach were applied. Both control and experimental group received the same lesson plans and exercises, thus controlling the effect of history and focusing solely on the impact of this automated feedback tool on their writing skills.
- **Maturation:** The threat was controlled by opting for a control group to compare the results. Participants in both groups would mature over time; thus, any change in the experimental group's results can be attributed to the treatment rather than natural development.
- **Testing:** To minimize this threat, three measures were taken. First, the pre-test and post test were separated by a 14 weeks period for minimizing memory effect. Second, the prompts selected in the post test were different from the pre-test. Finally, the inclusion of comparison groups also helped reduce the threat.
- **Instrumentation:** The pre-test and the post-tests were ensured to be of the same level and form and to be under the same assessment and protocol conditions.
- **Differential selection of subjects:** A placement test was administered to both intact groups to know the participants' level and ensure their homogeneity. Also, the entire sample studied English for the same level years and approximately had the same differences in gender.

2.5 **Research Population and Sampling**

This section examines the characteristics of the population being studied. It includes the description of participants in each phase of the study and the sampling procedures used for selecting participant. Moreover, a description about the research context is included as well as additional details on the participants' educational history.

2.5.1 Research population

The population for the current study consists of second-year EFL students at the English Department of Mohamed Lamine Debaghine Setif 2 University with a total number of 422 students which are divided into 10 groups. These groups are further divided into two sections and each section contains five groups. All students in this population have been at the university for at least one and a half years and have been selected to be in their second year based on equal tests and requirements. They have had equal university courses and modules. The sample being investigated includes 84 students, representing 19.33% of the overall population (N=422). The age of the sample spans from 18 to 33 years old, with a mean age of 19 years old. The sample is divided into two groups: an experimental group that consists of 44 students (34 females and 10 males) and a control group of 39 students (28 females and 11 males). The table below contains further detailed information about the background of the sample under investigation.

Table 2.1 Background information of the sample

Background information	Category	Students' number	Percentage
Gender	Female	62	74.7%
	Male	21	25.3%
Age	18	17	20.5%
	19	47	56.6%
	20	13	15.7%
	27	2	2.4%
	33	1	1.20%
Mean age		19	

2.5.2 Participants:

To fulfill the various objectives of the study, different participants were involved in different stages of the current probe. Those participants in each phase, with a purpose of involvement, contribute immensely to the study's progression. Below is a detailed description of their roles and contributions in each stage.

2.5.2.1 Participants in the Exploratory Phase.

This phase is aimed to establish a solid understanding of the problem and gather preliminary data. Seven teachers of the written expression module from the same university, where the study is taking place, were interviewed to provide insights into the common issues faced by the learners in writing. Additionally, a preliminary questionnaire was administered to 25 students who were not part of the main research sample. These students also completed a paragraph-writing task, which was analyzed to identify writing problems and common errors, serving as documentary evidence for the study as well as providing crucial responses concerning the encountered writing difficulties. Furthermore, six university teachers were consulted during this phase to refine and pilot the research instruments to ensure clarity and appropriacy of the tools. Likewise, 25 students outside the primary sample, who were also different from those who were administered with the questionnaire and the writing task, participated in a pilot study to test the wording and the allocated time of the research instruments.

2.5.2.2 Participants in the Pre-Experimental Phase:

This phase involved the entire research sample which included 84 students who were divided into two intact groups. These participants undertook a placement test to assess their initial language proficiency and ensure the homogeneity of both groups. They were also administered with the pre-test to establish a threshold for the study. The data collected at this stage provides a benchmark for measuring the effectiveness of the intervention.

2.5.2.3 Participants in the Experimental Phase

During the experimental phase, only the experimental group, which consists of 44 students, participated in the treatment sessions. These students received the intervention designed to address

the suggested automated feedback evaluation tool. While the attendance rate was consistent, minor absenteeism was noted and was accounted for in the analysis.

2.5.2.4 Participants in the Post-Experimental Phase

In the post-experimental phase, both the control and the experimental groups participated in the post-test to evaluate the effectiveness of the treatment. However, only the experimental group completed a satisfaction questionnaire and the post treatment interview. These two instruments were used to collect the participants' perceptions of the intervention and to assess the impact of treatment on their writing skill

It is worth mentioning that the number of participants has reduced to 74 students in total after analyzing the data, including 37 students in the experimental group and 37 students in the Control group. The reason behind such reduction is the absenteeism and incomplete answers for some students. Therefore, their answers were not included in the final analysis of the data.

2.5.3 Sampling

According to Kumar (2011), Sampling is defined as the process of using a portion or section of a large population in order to represent the entire population. Sampling is performed in order to estimate or forecast specific outcomes and features. It has the benefit of saving time, resources, and cost. However, its disadvantage is that it provides only approximations rather than total accuracy regarding population itself. This increases the margin of errors and inaccuracies in the sampled population. Sampling as such is an equilibrium between efficiency and accuracy, as researchers save resources yet risk compromising precision. Selecting a sample rather than scrutinizing the whole population is prone to inaccuracy; thus, it is a paramount consideration for anyone conducting research.

Researchers must make sampling decisions early in the research planning process since the quality of research depends not only on using the right methods and tools but also on choosing the appropriate sampling strategy (Cohen et al., 2007). Kothari (2004) describes sample design as a comprehensive strategy that directs researchers in selecting a sample from the whole population. It outlines the particular guidelines that a researcher must adhere to in selecting participants, ensuring that the selection process is systematic and appropriate for the study. In educational research, sampling designs are categorized into two primary types: probability (random) and non-probability (non-random), each comprising several techniques.

Probability Sampling, or random sampling, entails randomly selecting participants, guaranteeing that each member of the population possesses an equal and independent possibility of being selected (Kumar, 2011). "Equal" indicates that each element possesses an identical chance of selection, whereas "independent" indicates that the selection or exclusion of one element does not affect the others. This technique is objective and generates representative data that could be generalized to the whole population.

On the contrary, non-probability sampling does not guarantee equal chances of selection to every participant. The researcher selects the elements of the sample based on certain properties which are in most cases related to the aim of the study (Cohen et al., 2007). In other words, the participants of the study do not possess an equal chance of being selected. This technique, which is more prone to bias, concentrates on certain segments rather than aiming for the representativeness of the entire population. Non-probability sampling usually depends on selecting participants from groups that are already predetermined or assigned.

In the current investigation, the researcher opted for a non-probability sampling design, specifically convenience sampling, in which participants were selected based on their availability

rather than randomization. The rationale behind the current choice is due to the fact that it is almost impossible to assign new groups for the students rather than their actual predetermined ones. These groups were pre-assigned by the administration and could not be altered due to the students' fixed time schedules. The researcher encountered difficulties in implementing randomization. Doing so would have disrupted the students' learning by requiring them to attend the same writing course twice. They would have had to take it once as part of their regular curriculum and again as participants in the study. Consequently, guaranteeing that the intervention took place in a genuine, realistic classroom environment was a fundamental aspect of the study's design. Unlike the selection of the sample, the decision to choose between the experimental and control group was randomly made. The names of the two classes were written separately on two different pieces of paper. These papers were folded, shaken, and thrown on a table. The first one to be selected was considered the Experimental group while the remaining one was the Control group.

In quasi-experimental research, randomization is often constrained by administrative limitations and the underlying features of the study. This may jeopardize both the internal and external validity of the study. Nonetheless, these concerns may be reduced by using measures such as homogenous groups in this study. By ensuring that all of the students received training from the same instructor using the same instructional strategies and materials, the researcher was able to reduce the impact of extraneous factors on the findings. Hence, to evaluate the writing skill equivalence between the experimental and control groups and ensure homogeneity, all participants completed a proficiency test. A t-test was used to compare their overall results. Indicating no significant difference in proficiency levels shown by a P value above 0.05; confirms the equivalent abilities of both groups. Students were informed about the study and its objectives. Also, they were asked to provide their consent for participation. Students were assured the right to withdraw at any

time without consequences and that their participation would not affect their grades. The anonymity of their obtained data as well as their participation were guaranteed by the researcher.

2.5.4 Study context:

The research setting and participant background are decisive aspects of any research endeavor. These factors significantly influence the study design, data collection methods, and the interpretation of results. Thus, a detailed description of the study context, including the research setting and participants' background, will be highlighted below.

Patton (2015) highlights that the research setting is not just the physical location but also includes the time frame of the data collection. The participants' actions and the quality of the gathered data could be influenced by these temporal and spatial aspects of the research context (Lawrence-Lightfoot & Hoffman Davis, 1997). Thus, it is paramount to identify both notions in the current research setting.

Accordingly, the study was completed at Mohammed Lamin Debaghine, Setif 2 University. The institution consists of three divisions: humanities and social sciences, letters and languages, and laws and political sciences. Nevertheless, the inquiry is limited to the department faculty of Foreign Languages, specifically at the Department of English Language and Literature. The treatment phase occurred during the regular classroom settings at their devoted timetable as well as at the computer labs where computers and internet connection are available. The researcher obtained the consent of the department's dean to use all the department's available resources (**see Appendix A**). Students were taken to these labs for an introductory workshop to equip students with the knowledge needed to use the suggested automated feedback evaluation technology website before using it on their mobile phones (**see Appendix N**). Later, a demonstration video of the same tool was shared in the class's Facebook group, which the researcher moderated, to ensure that every student had a guide to

use the tool (see **Appendix M**). Once the students became familiar with the tool, the setting shifted to the classroom, where students could use the automated feedback technology on their phones. This arrangement was necessary since the Internet laboratory was not always available during the scheduled session time (Sunday at 8:00 a.m.). Moreover, the written expression was not originally taught at computer labs, so it was slightly impractical to escort the entire class to a different classroom setting. It is worth mentioning that all students possessed mobile phones. However, for students without access to mobile internet, both the instructor and other students shared their internet connections to ensure that all participants could stay connected. Finally, students were required to turn off any notifications on their mobile phones in order to guarantee total focus during the classroom session.

Additionally, according to Leavy (2017), the spatial setting for research experiments could be classified as natural (in physical environments), artificial (in scientific labs), or virtual (on the internet). Thus, during the spring break of the second semester, an online session was conducted to maintain the flow of the treatment process and ensure that the students were instructed to write their paragraphs and actively use the required technology. This session took place after obtaining the students' consent. Furthermore, to ensure the homogeneity of the groups, both the control and the experimental groups were instructed by the researcher, who was also an adjunct faculty instructor in the department.

As for the time frame of this research, it was conducted during the second semester of the academic year of 2022-2023 in the regular sessions of the written expression module. The current probe spanned from February 2023 to May 2023. Each session lasted for one hour and a half and was held over a 14-week period. The lessons of the second semester aligned more effectively with the experiment's purpose of learning to compose and be familiarized with the types of paragraphs.

2.5.5 Students Learning Profile:

The participants in this study are eighty-four second year students from the Department of English at the University of Mohammed Lamine Debaghine. They were enrolled in the English language and literature programme to pursue a Bachelor's degree which qualifies graduates to teach English at the middle- school level in accordance with Algerian educational regulations.

Prior to their university enrollment, these students had completed seven years of English studies, mainly four years in middle school followed by three years in secondary school. Moreover, passing the official Baccalaureate exam with satisfactory scores in English was a prerequisite for their admission to the program. This ensured that participants possessed a foundational level of English proficiency before entering the department.

By the time the research took place in the second semester of the academic year of 2022-2023, students had spent at least one and a half years in university. It is worth mentioning that there exist other students who might have extended their enrollment period due to course repetition. Furthermore, during the first and second years of study, the primary participants in the experimental phase received three hours of instruction per week in written expression according to the official syllabi (**see Appendix C**). These sessions are intended to be taught solely as tutorial sessions (TD sessions), as shown in the official syllabi. However, within the department where this research is taking place, the administration decided to divide this module's sessions into lectures and TD sessions. This arrangement was implemented due to the limited availability of classrooms during the week. Students first attend theoretical sessions, followed by practical TD sessions where they practice writing and apply the concepts that they have learned. The written expression module is regarded as a crucial subject because of its assigned coefficient, which is four, and the number of credits, which is six. Thus, it is essential to improve students' level in this module. Regarding

evaluation, the final grade for Written Communication is calculated by averaging the scores of the test from Td sessions and the exam.

Over the course of two academic years, students are introduced to the components and features of sentences and paragraphs. They have a thorough practice in the first year about parts of speech, types of phrases and sentences, and types of sentence errors. Then, they learn about paragraph structure, including the topic sentence and the controlling ideas. They also learn fundamental types of discourse: compare/contrast, cause/effect, and argumentative paragraphs in the second semester. However, during their third undergraduate year, students receive only 21.5 hours of writing instruction per semester, averaging 1.5 hours per week. At this stage, they are introduced to essay writing.

Paragraph writing was selected as the focus of this study because it is a foundational component of essay composition, which involves more complex structures. Composing a paragraph requires less time for both students to complete and for professors to evaluate. Considering that the second-year curriculum mostly emphasizes paragraph writing, with essay writing introduced only briefly in the second semester of the academic year. Therefore, it seemed more pragmatic to run the experiment on paragraph writing. This focus makes second year students particularly suitable for this study, as they transition from theoretical knowledge to practical application. While first year students work on decontextualized sentences to correct errors, second year students advance to the more complex task of composing their own pieces of writing.

Another reason for conducting this research with second year students is their familiarity with the study habits at university level; first year students tend to rely more on teacher guidance and may face challenges when adapting to the autonomy required by the intervention. Furthermore, the process-oriented approach to writing, as articulated in the university curriculum, suits the

treatment effectively. This approach initially focuses on content development and organizational structure of ideas in the first drafts, then moves to the editing stage as it emphasizes language use, mechanics, and vocabulary. Thus, it is suitable to have the teacher provide content feedback first; then followed by the structure feedback provided by the suggested technology.

2.6 Data Collection Phases and Research Instrumentation:

The current study under scrutiny utilizes a mixed-method approach to data collection. Thus, several quantitative and qualitative data were implemented in order to achieve the research objectives. First, to ground the problem of the study, an exploratory phase was conducted, which included a questionnaire and a writing task with students as well as an interview with teachers. This was followed by a pre-experimental phase which involved administering a placement test, a quantitative tool, to determine the level of students and to ensure the homogeneity of both groups. Moreover, the experimental phase consisted of a pretest, a progress test, and a posttest was to evaluate the impact of the treatment. Finally, the post-experiment phase involved a questionnaire and semi-structured interview to collect data about the students' perceptions of the treatment and their attitudes towards the effectiveness of the automated writing evaluation tool on their writing skills. These phases along with their implemented instruments are thoroughly discussed below.

2.6.1 Exploratory Phase and Research Instrumentation:

After carefully reviewing the literature on the topic, the researcher sought to build a solid ground for the presence of the problem within the target population. To accomplish this, two preliminary data collection tools were used: an interview and a questionnaire.

2.6.1.1 Students' Preliminary questionnaire

This questionnaire was designed as a preliminary tool to allocate the problem and ensure its existence. It was adapted from Ceylan (2019). The original instrument consists of 19 questions;

however, only 13 items were selected as they were thought to better align with the specific research objectives. (see **Appendix D**) The reduction in the number of items ensured the focus on the aspects that are most relevant to the challenges that are thought to be faced by students when instructed to write. The questionnaire was in a Likert scale format with five response options ranging from Strongly Agree to Strongly Disagree. This enables the participants to indicate a range of agreement or disagreement with the provided statements. These 13 selected items addressed a variety of key factors that influence students' writing skills. They included linguistic and content knowledge, self-confidence, motivation, anxiety, feedback, and classroom instruction. These factors were deemed crucial in accounting for the problems experienced in writing.

In addition to the Likert-scale items, a writing task was included as an open-ended question. The task was designed to give the participants the freedom to describe the particular problems they experience when writing and the reasons that they think they influence these problems. The inclusion of this qualitative element aimed to gain a more in-depth understanding of the students' perception.

2.6.1.1.1 Piloting the Students' Preliminary questionnaire

Two instructors from the department of Mohammed Lamine Debgline Setif2 University, who teach the module of methodology and written expression, were consulted to pilot the preliminary questionnaire. Initially, the researcher selected only 12 items from the questionnaire of Ceylan (2019). However, one teacher of written expression suggested including the first question that address students' level of difficulty during writing tasks. This was believed to be a crucial question to prove and to ground the problem of existing writing challenges. The idea of including the writing task was also suggested by the written expression instructor and was welcomed by the methodology teacher. Despite being a daunting task in terms of evaluation and analysis, the writing

task was suggested to be a source for in-depth data that could better explain the problems faced by students.

2.6.1.2 The teachers' preliminary interview:

As another endeavor to substantiate the existence of the problem within the research population, this research employed an interview as a qualitative method of research to investigate teachers' views on the issues faced by second-year students in written expression classes. The main objectives of the interview were to gain a discernment from the teachers' point of view about the issues that students encounter while writing, the impact of teachers' comments on solving such issues, and the teaching practices teachers adopt to enhance students' writing skills. Keeping this purpose in mind, eight open-ended questions were designed to cover a variety of aspects related to written expression skills, such as the overall quality of students' writing, the most common issues students face, and the underlying reasons behind these difficulties (**see Appendix E**). The instructors were also requested to reflect on whether these challenges are primarily ascribed to some individual factors, like insufficient practice or motivation, or due to educational factors, like instruction methodology or course organization.

Additionally, the interview attempted to elucidate how teachers provide feedback to students on their writing and how effective they believe that this feedback is compelling in helping students improve their writing. Moreover, they were asked whether they think that there exist potential barriers that impede students from utilizing the feedback on their writing. Finally, the interview sought to unleash the teaching strategies that instructors use which they consider efficient in assisting students to overcome their writing difficulties and improve their writing skills.

2.6.1.2.1 *Piloting the preliminary teacher interview:*

The interview was also piloted by the same instructors who piloted the questionnaire. Minor modifications were suggested regarding the wordiness and difficulty of the questions since this tool was administered to teachers. It is worth mentioning that the same written expression teacher volunteered to answer the interview. Being his bailiwick, the writing expression instructor spontaneously answered some of the questions addressed in the interview; thus, he simply decided to finish answering the remaining questions, providing valuable insights into the exploratory phase.

2.6.2 *Pre- Experimental phase and Research Instrumentation:*

In the pre-experimental phase, the researcher used the placement test to guarantee that the experimental group (EG) and control group (CG) were homogeneous. This test measured the participants' language proficiency to ensure sure both groups had the same level of ability prior to starting the experiment.

2.6.2.1 Placement Test (Pearson, 2006):

Both the experimental and the control groups undertook the same placement test (Pearson Education, 2006), which contained two versions (A and B) and an answer sheet (see Appendix F). The test primarily focused on grammar as an accurate indicator of the participants' linguistic ability. Thus, this would ensure the homogeneity of the groups in terms of general language level. Each version of the test contained 100 items with four options for each question. Each correct answer was scored one point; therefore, the overall score is 100 points.

The participants were informed about the purpose of the test, which was to determine their overall linguistic competence. In other words, students were informed that wrong answers were welcomed and that the scores from this test will not be part of their overall academic year grades.

This helped the participants to answer within a relaxed environment. Students were allocated 40 minutes to complete one of the test versions. The researcher observed the students during the test administration to ensure the reliability of the results and to prevent any cheating attempts.

Moreover, to facilitate and accelerate the correction process, a test correction grid was utilized. Specifically, a transparent overlay scoring template was employed to place the grid directly on the student's answer sheets to quickly identify the correct answers without manually scoring each response individually. The scores obtained aligned with the Common European Framework of Reference for Languages (CEFR) levels, as shown in Table 2.1. These scores were also used to select the experimental materials that are appropriate for the participants' language level.

Table 2.2

Common European Framework of Reference for Languages Levels

Total Score	General Level	CEFR Level
0-9	Beginner	A1
10-25	Elementary	A1+ to A2
26-45	Pre-intermediate	A2+ to B1
46-65	Intermediate	B1
66-85	Upper-intermediate	B2
86-100	Advanced	C1

2.6.3 Experimental Phase and Research Instrumentation:

The experimental phase is an essential step in the research process because it involves answering the research questions through testing under highly controlled conditions and measuring the obtained results.

2.6.3.1 The Pretest/ Progress test/ Posttest:

Within the quasi-experimental designs, the pretest and the posttest play an important role. A pretest assesses a participant's initial level prior to the experimental treatment, while the posttest evaluates the outcomes after the treatment to determine its effectiveness (Leavy, 2017). In addition to those assessments, progress tests can complement the traditional pretest and posttests through enabling the researcher to evaluate whether students are making a measurable progress and that the intervention is indeed yielding an improvement (Albanese & Case, 2015). Tests are fundamental instruments that measure language proficiency as they provide valuable insights of the performance and achievements of learners. In this context, the posttest serves as a summative assessment that is administered at the end of an intervention to assess the results attained by both individuals and groups (Hughes, 2003).

Prior to designing any test, it is crucial to clearly define its purpose. Johnson et al. (2008) emphasize that understanding the test's objectives is essential for creating an effective and relevant assessment. Thus, the purpose of this study is to evaluate the effectiveness of automated evaluation technology in enhancing students' writing skills. That is to say, the objective of the tests is to evaluate various dimensions of linguistic competence, including lexical proficiency, which examines students' ability to use a wide range of vocabulary; syntactic proficiency, which focuses on the accuracy and appropriateness of grammatical structures; and mechanics, which evaluates correct spelling and punctuation usage. Additionally, these tests assess organization by examining the coherence and cohesion in the flow of ideas and evaluate content development through determining how effectively the participants construct and support their arguments.

Furthermore, these aspects are assessed collectively through integrative testing, a testing method that requires candidates to integrate multiple language components within a single task. This

contrasts with discrete-point testing, which requires individual language components to be tested separately, item by item (Hughes, 2003). Consequently, these writing tasks of pretest, posttest, and progress tests are implemented as performance-based assessments since they are designed to evaluate students' writing abilities. Perlman (2003) explains that a performance assessment requires students to generate their own responses to a given task, which are then evaluated using specific criteria of scoring rubrics. This type of assessment contrasts with multiple-choice questions which require students to select the correct answer from a set of options. A performance task allows students to produce a complete piece of writing where they demonstrate their skills in a more authentic and comprehensive manner.

Moreover, the tests employed in this study were criterion-referenced. Unlike norm-referenced tests, which compare an individual's performance to that of other students without offering insight into their specific abilities, criterion-referenced tests provide information about whether students can satisfactorily perform a given task (Hughes, 2003). This method ensures a more precise evaluation of each student's language and content performance.

2.6.3.2 Description of the Design of Pretest-Posttest and Progress Test:

Based on the principles of designing writing assessment tasks stated by Weigle (2002), several decisions were made to develop the pretest, posttest, and progress tests. These principles state the importance of clear instructions, relevant subject matter, diverse task types, appropriate use of stimulus materials, and flexibility in selecting the test prompt. Each test was created to match these principles to address the specific objectives of the study.

The research prompts of each test were administered as follow:

- **Pre-Test Question:**

"Write a paragraph about the effects of COVID-19 on education."

- **Progress Test Question:**

"Does the integration of technology in classroom sessions help to improve the learning process?"

- **Post-Test Questions:**

a. *"What are the differences between classroom lessons and other sources' lessons like the internet and television?"*

b. *"People who travel often to another country for a long period often suffer badly from homesickness. What are the causes for homesickness?"*

c. *"Do you agree with the view that online communication does not promote the same levels of satisfaction for people as traditional face-to-face communication?"*

d. *"Narrate a story about a disagreement you had with a friend or family member, and how did it end?"*

Samples from students' answers of pretest, progress tests, and posttest are shown in **Appendix (G, H, , and I)**

2.6.3.2.1 Clarity of instruction and wording:

Initially, the clarity of instructions was emphasized to guarantee that participants understood thoroughly the requirements of each task. The prompts were made to be concise and precise in projecting the type of the expected written paragraphs. For example, the pre-test prompt, "Write a paragraph about the effects of COVID-19 on education," was straightforward and clearly stated the

focus on cause-effect relationships within a single-paragraph format. Similarly, the progress test prompt, "Does the integration of technology in classroom sessions help to improve the learning process?" was simple and guided students toward an argumentative paragraph type. The post-test prompts, such as "What are the differences between classroom lessons and other sources' lessons like the internet and television?" and "Narrate a story about a disagreement you had with a friend or family member, and how did it end?" further emphasized clarity by including precise instructions and definitions (e.g., "homesickness") to minimize confusion.

2.6.3.2.2 *Relevance of subject matter:*

The second principle recognizes the importance of making prompts' topics (content areas) interesting, engaging, and familiar to students. This procedure reduces anxiety and promotes authentic language. Topic knowledge must be highlighted when determining the test purpose. Since the purpose of this test is to assess students' language ability in topics that all test takers are familiar with, tests should explicitly include topics that are known for all students. These tests are unlike placement tests in which the topical knowledge is excluded and the focus is solely on language ability as in multiple choice questions and grammatical extracts. Also, they are different from the tests that assess students' content knowledge of a particular subject course through written essays. Thus, the knowledge of a topic and the familiarity with the test content is emphasized. In this case, the tests' questions must be familiar to all test takers and could be either general or based on personal experience. There is a debate about whether students should include personal experience in their work. Some of them tend to be cautious while others be very explicit and include unnecessary details, especially when being unfamiliar with the topic. Both choices in this study were taken. The pre-test topic on the effects of COVID-19 on education is believed to be relevant to student's knowledge given its universal impact on students' experiences. The progress test explored

technology integration in classrooms which is another relatable and up-to-date topic for students. Moreover, the post-test offered different prompts to match students' varied interests and experiences. These topics covered the causes of homesickness, differences between classroom lessons and online sources, personal disagreements, and the effects of online communication. These prompts included both general topics and personal experiences to make them relatable to all students. By allowing students to choose a topic, the post-test ensured they could choose the one they felt most comfortable writing about, making the assessment fair and engaging.

2.6.3.2.3 *The choice of tasks:*

Whether to provide students with one prompt or several ones to choose from is a topic of debate. Offering several choices is believed to help students to feel less anxious and able to generate ideas when they are more familiar with the topics. However, there is also the possibility that some students might choose poorly and become distracted from the main task, whereas they could perform better when given only one prompt to focus on. For this reason, both options were used in the assessments. The pre-test provided a single prompt while the post-test, which was designed by several teachers for the final exam, offered students with multiple prompts to choose from. These prompts covered different writing genres, including expository, argumentative, cause-effect, and narrative styles. This flexibility allowed students to select the task they felt most comfortable with while still allowing the test to evaluate their writing skills across various genres.

2.6.3.2.4 *Stimulus material:*

The inclusion or exclusion of stimulus material was considered. The tests contained no external materials and sources such as reading passages. This decision allowed students to generate

their own ideas and to focus solely on their ability to organize and express their thoughts. The goal was to assess their language proficiency rather than their knowledge of a specific topic.

2.6.3.3 Scoring the Pre-Post and Progress Tests:

Since they are part of performance tests, the paragraph corpus provided by the pre-post and progress tests are corrected and scored using a rubric. A scoring rubric is a structured set of guidelines that are used to judge the performance of students when clear answer keys like the ones found in multiple-choice questions are inconvenient and insufficient for the task (Perlman,2003). The wiring rubric used in this study is adapted from Jacob et al.'s (1981) scoring profile (as cited in Hughes, 2003; Weigle, 2002); Ardiyanto (2021) and Brown and Lee (2015)(cf. Appendix R).

The chosen rubric is an analytic rubric that rates several writing aspects rather than providing a single score like holistic rubrics. The latter relies on the rater's overall impression of the written text and requires one reading from the rater to decide upon the overall score. In contrast, the analytic scoring entails several readings to score each writing criterion, which eventually would construct the final score (Weigle, 2002). Therefore, as Wiseman (2012) stated, analytic scores provide more detailed analyses and are more appropriate for placement and diagnostic objectives since, by contrast, holistic scoring emphasizes the writer's strengths rather than their particular weaknesses. Moreover, regardless of being time consuming, analytic rubric is reported to be more valid, reliable, and useful as it provides detailed description of each involved aspect in writing (Wiseman, 2012).

Based on the recommendations of weigle (2002), the scoring rubric for this study assigned an equal value of 4 points for each writing component: vocabulary, grammar (language use), mechanics, organization, and content. The rationale behind providing equal importance to each writing component is based on the primary focus on assessing the overall writing ability rather than merely

specific aspects. The score results of each aspect will be added to the other counterparts to generate the whole score. Hence, the ultimate score for a writing paper of these tests will be 20.

Accuracy, on the one hand, was evaluated through vocabulary, grammar, and mechanics by focusing on lexical variety, grammatical accuracy, and correct use of spelling, punctuation, and capitalization. Quality, on the other hand, is measured by assessing content and organization through clarity, unity, coherence, and cohesion. Each component was rated on a four-level scale that ranges from "very poor" to "excellent". A specific description of each scale is provided to ensure consistent and objective evaluation. The rubric was chosen by following the guidelines of Perlman (2003) for selecting a scoring rubric. It relates to the measured outcomes, covers the important dimensions of student performance, and is useful, feasible, manageable, and practical.

2.6.3.4 Pilot testing of the pretest-posttest:

To ensure the validity and reliability of the tests used in this research, a pilot testing of the experiment tools was conducted. The first step was to consult experts in both written expression and methodology. Four experienced permanent teachers from the department, who are well aware of the written expression syllabi were consulted. They teach first, second-, and third-year undergraduate students, as well as master's level courses. Their expertise was sought to evaluate the tests' level of difficulty, clarity of wording, and length. The pretest and progress test questions were approved by these teachers, with minor refinements, to be valid. Regarding the post test, as it was part of the final exam, all second-year teachers of the written expression module have participated in its development and in formatting the questions. They ensured that the paragraph prompts were clear to test takers, appropriate to the curriculum and familiar to the students. This process directly strengthened both content and face validity. Content validity was emphasized through ensuring that the test represented the type of lessons covered in the sessions. Similarly, face validity was improved

through mirroring the format of the exercises that were undertaken in the classroom and through reducing the possibility of confusion by improving the clear instructions of paragraph prompts.

The second procedure was to conduct a pilot study with students from the target population who are similar to the main study participants' but not part of the final sample of the research. A third group, different from the chosen intact groups, was conveniently sampled as they were accessible through a collaborative teacher who agreed to conduct the pilot study during his session. The pilot study had two main goals: first, to check if the pre-test instructions were clear and easy to understand in order to avoid any confusion from participants and second, to ensure that the allotted time for test completion was sufficient. The phone timer was used to count the time taken by students to finish answering the test. Students were able to finish the test within the suggested time of 90 minutes without asking for clarifications. This suggested that the test's length and difficulty were appropriate and the allocated time was convenient.

Moreover, because paragraph writing was part of the second-years syllabus, using paragraph prompts during classroom activities was not an unfamiliar process; thus, the internal validity would not be threatened by a pilot study group sharing information about the test with the experimental and control groups. The pilot study group belonged to a different section and followed a different time table from the one of the experimental and control group. It is worth mentioning that the results from the scores of this pilot study were used to measure the reliability and validity of the tests.

2.6.3.5 Validity and Reliability of Pre/ post-tests

Validity and reliability are crucial to the trustworthiness of any research. They result in generating accurate and valid data, thus ensuring these notions in this study is inevitable. The measurement of both validity and reliability is based upon the results of the pilot study.

2.6.3.5.1 *Validity of Pre/ Post-Tests*

Validity is defined by Lodico et al. (2010) as the degree to which a given instrument measures what it is intended to measure. The challenge in the assessment of writing relies on the multifaceted and complex nature of the writing ability. In order to measure this ability, performance assessment is required which entails pre-defining the constituent components of the writing ability. This assessment process is referred to as the construct validity which aims to accurately measure an abstract and non-observable trait or ability (Lodico et al, 2010). The writing ability in this study is defined as the ability to produce accurate and high-quality writing that is characterized by correct mechanics such as spelling and punctuation, proper grammar, appropriate vocabulary usage, effective organization and well-developed content. These components can be evaluated through a performance task where writers are required to generate a written passage that can be measured using an analytic rubric. Therefore, by predefining the components of writing ability (mechanics, grammar, vocabulary, organization, and content), the tests used in this study align with the principle of construct validity by ensuring that the instruments (pre-test, progress test, post-test, and the analytic rubric) accurately measure the intended construct (the writing ability). However, it is not sufficient to merely establish construct validity; rather, empirical evidence is required (Hughes, 2003). Consequently, to further establish the validity of the research instruments, it is important to examine their content and face validity.

- **Content validity**

Before administering any test, it is crucial to ensure its content validity during its development phase (Hughes, 2003). Content validity refers to the degree to which a test includes the topics covered during the classroom instruction (Lodico et al., 2010). A test is considered to have a low content validity if it includes items on topics that were not taught in class. Students cannot be

assessed on subject materials that they have not been previously taught by their teachers. This hinders the test from accurately reflecting the students' understanding of the intended learning objectives. Moreover, a test must have an appropriate level of clarity. Despite a student possessing the required knowledge, unclear or overly complex test prompts may impede their ability to demonstrate that knowledge effectively. For the present research, content validity was established through a pilot study which was conducted with experts in both the written expression module and research methodology. These teachers confirmed that the test aligns with the content areas covered by the curriculum. Furthermore, students who participated in the pilot study guaranteed that the degree of the test prompts' difficulty was appropriate for the level of the target population. This process ensured that the test effectively measures the intended constructs (the components of the writing skill) without being influenced by irrelevant content or confusing language difficulty.

Furthermore, in order to provide additional evidence for the pre-test content validity, a statistical analysis of Pearson's correlation coefficient (r) was conducted using the data derived from the pilot study. This analysis investigated the relationship between the scores of each of the test's five components (Mechanics, Vocabulary, Grammar, Organization, and Content) and the overall test score. Pearson's r is a measure of the linear relationship between two continuous variables, indicating both the strength and direction of the relationship (Leavy, 2017). It ranges from -1 to +1, where +1 represents a positive correlation (as one variable increases, the other increases), -1 represents a negative correlation (as one variable increases, the other decreases), and 0 indicates no linear relationship. The rationale behind applying this measurement in the current probe is that if each component truly measures a certain aspect of the writing ability, it should demonstrate a positive correlation with the global score. This indicates that the students who perform well in a specific area also tend to perform well on the test as a whole. The observed high positive correlations for all

components (Mechanics $r = 0.718$, Vocabulary $r = 0.639$, Grammar $r = 0.834$, Organization $r = 0.798$, and Content $r = 0.844$) provided empirical support for the idea that the test content is relevant and representative of overall writing ability. The p-value ($p < 0.01$) indicates that the observed correlations are unlikely to have occurred haphazardly. Therefore, it would further strengthen the validity of the findings. This statistical approach combined with the comments from experts strengthens the claim of content validity by demonstrating that the different parts of the test are working together to measure the intended construct.

b) Face validity:

Face validity refers to whether a test at the first glance measures what it intends to measure (Gorvine et al., 2017). This involves checking the surface level of the test. More precisely, it evaluates if the format, questions and instructions are appropriate for the students. Face validity is important because when a test appears relevant and understandable, participants can engage with it and provide accurate answers which results in more reliable data. (Allen et al.,2023). The tests of the current study were designed to assess writing competence clearly, using straightforward instructions that are familiar to the participants from regular writing classes. The pilot testing confirmed this familiarity as participants from the pilot study group reported no difficulty in understanding and following the instructions. Considering the fact that the main participants of the study possessed similar educational backgrounds and writing abilities to the pilot group, it was reasonably assumed that the pre-test would be equally suitable.

2.6.3.5.2 Reliability of Pre/ post-tests:

Reliability is a crucial criterion that researchers evaluate to ensure the quality of a measurement tool. It is defined as the consistency of results. It refers to the ability of an instrument

or a test to generate similar scores for an individual when tested multiple times or evaluated by different raters (Lodico et al., 2010). The assumption underlying this consistency is that the variable being measured remains stable over time. In this research, two reliability measures are conducted: interrater reliability and internal consistency.

a) Internal consistency reliability:

Internal consistency refers to the extent to which all items within a test are aligned and measure the same underlying construct (Lodico et al., 2010). It is a crucial aspect of reliability which ensures that the instrument generates consistent results across its component. That is to say, internal consistency in a performance test of the writing skill would mean that all the components used to evaluate the paragraph align with the construct of writing skill. The test was measured using an analytic scoring rubric that contains specific criteria including grammar, vocabulary, mechanics, content and organization.

To evaluate internal consistency, Cronbach's alpha was used as a statistical measure. According to Tavakol and Dennick (2011), Cronbach's alpha examines the correlation between the components of a test. It produces a value between 0 and 1. A higher value that is usually above 0.7, indicates a strong internal consistency which suggests that the test components reliably measure the same construct. For this test, the alpha coefficient was calculated by analyzing the interrelationships among the test components. It yielded a value of $\alpha = 0.875$. This result indicates strong internal consistency among the five items of the Pre-test which evaluates the writing skill; thus, confirming the reliability of the test. By ensuring high internal consistency, the researcher established confidence in the tool's ability to produce dependable data for the study.

b) Inter-rater reliability:

To determine reliability and consistency of scores in this research, a second volunteering rater was approached to rate the scores of the pre test in the Pilot study, thus, inter-rater reliability was assessed. This type of reliability measures the level of agreement between two individuals rating the same phenomenon (Cohen et al., 2018). As Bell (2005) suggests, reliability should be checked during question wording and instrument piloting. To ensure consistent scoring and reliable post-test results, Pearson correlations were calculated between the two raters' scores for accuracy and quality on pilot participants' pre test writing samples. The analysis revealed a strong positive correlation ($r = 0.947$) between the raters' scores, which was statistically significant ($p < 0.01$). This high correlation indicated a strong inter-rater reliability. This suggests that the pre-test would yield consistent data. Consequently, the average of the two raters' scores was used as the final pre-test score for both the experimental and control groups.

2.6.4 Post-Experimental phase and Research Instrumentation:

To address the third research question, the post-experiment data collection was conducted by using both a questionnaire and an interview to explore students' perceptions of the implemented treatment. Relying solely on the pre and post tests statistics was insufficient because this data focused primarily on the teacher's perspective. The tests results alone could not fully explain the observed changes in the students' writing skill. Therefore, these additional data collection tools were used to gain a more comprehensive understanding of the students' experiences and determine whether the observed impact on their writing could be attributed to the treatment itself or to some other extraneous variables. Furthermore, the combination of a structured questionnaire and an interview was chosen to allow students to share their ideas in different ways. The interview in particular

provided students with a better opportunity to articulate their thoughts without the restrictions of the questionnaire's structured items.

2.6.4.1 Description of the Post Treatment Questionnaire:

The post treatment questionnaire that is used in the current study is considered a vital instrument for assessing student perceptions of the Automated Writing Evaluation feedback. This survey used a five-point Likert scale, where respondents must select one answer from a range of positive to negative response options. 1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree. The 5-point Likert scale was employed due to its simplicity, flexibility, and reliability (Dornyei & Taguchi, 2009). Furthermore, the questionnaire was firstly adapted from Zhai and Ma (2021) and was further modified and enhanced with items from other validated studies, including Wilson and Czik (2016), Ariyanto et al (2021), Wang et al. (2012), and Parra and Calero (2019). This procedure was selected to conform to the research objectives and cover a wider range of concepts related to the treatment. The final version of the questionnaire consists of 25 items that are categorized into other sections. These sections address key aspects of the experiences and attitudes of students toward the used AWE feedback.

The section on perceived trust includes four items adapted from Zhai and Ma, (2021) to measure the extent to which AWE system in this research is perceived to be reliable. This section shows the degree to which participants are confident that the system can accurately detect errors in writing, provide fair scores, and ensure the privacy of their personal data. Trust is viewed as one of the critical factors that determine the user acceptance and continued usage of the technology.

The second section of this questionnaire is devoted to the perceived ease of use. It contains five items that are also adapted from the work of Zhai and Ma (2021). These items examine participants' perceptions of the extent to which the AWE system is user-friendly by focusing on

clarity and relevance of the provided feedback. This section also examines the system's flexibility by satisfying different needs through allowing access to feedback at any time and place. Moreover, the last item is devoted to the extent to which this AWE tool is easy to use. Indeed, the simplicity of the interactions between users and the system is essential in improving user satisfaction and fostering the usage of the tool.

To examine the effect of AWE on autonomy, the autonomy section contains three items adapted from Wang et al. (2013). This part measures to what extent feedback from AWE promotes self-directed learning in that it helps the participant to recognize and correct his/her own writing mistakes without any external help. It also examines whether the system helps develop confidence in independent writing tasks, which is an important factor in allowing students to take control of their learning process.

The perceived usefulness section, adapted from items by Ariyanto et al. (2021) and Parra and Calero (2019), measures the educational gains obtained from AWE feedback. The section measures how effectively the system improved participants' writing skills in the aspects of grammar, punctuation, spelling accuracy, sentence clarity, and organization of ideas. It also looks at the impact of the AWE feedback on overall written paragraphs quality, with a view to its potential in developing students' academic writing skill.

Moreover, the section about motivation is composed of three items that are adapted from Zhai and Ma (2021) and Wilson and Czik (2016). This section attempts to assess the extent to which AWE feedback arouses subjects' interest, engagement, and productivity in writing tasks. It assesses whether the feedback encourages more frequent writing, increases interest in improving writing skills, and fosters a positive attitude toward writing as an activity that is constructive and rewarding.

This section of behavioral intention to use AWE features includes three items, adapted from the work of Zhai and Ma (2021), which evaluate participants' willingness to continue using AWE feedback in the future. This section investigates the participants' probability of integrating AWE systems into their habitual writing practices and their tendency to recommend the tool to others. This would help understand the students' overall satisfaction of the tools and its usefulness and how likely the system is to be adopted by more people. These behaviors show how AWE systems can remain effective and expand to other educational settings.

Finally, the last section is about facilitating conditions. It consists of only two items adopted from Zhai and Ma (2021). This section examines the availability of resources and expertise that the participants need to effectively make use of the AWE system. It renders if the students feel adequately equipped and supported in their access and use of AWE used in the treatment. This highlights how well the selected AWE tool is able to include diverse learners that vary in their digital literacy and their ability to access the educational tools. Thus, this would promote the utility of the selected technology to provide an educational environment where every student can benefit from the system, fostering equal opportunities for learning and skill development.

2.6.4.1.1 *Piloting the Post treatment questionnaire:*

In order to pilot test the questionnaire that would be administered to view students' perceptions about the use of AWE in the treatment and its effects on their writing skills, six available expert teachers were consulted. Their feedback was sought to review the questionnaire for issues related to wordiness, clarity, and content alignment with the objectives of the third research question.

The first intention was to adopt the questionnaire from the work of Zhai and Ma (2021); however, several sections were found to be irrelevant and were suggested to be either removed or

replaced. Some items were also recommended to be merged with other sections. As a result, the first draft was altered as follows: The sections that were advised to be omitted from the original questionnaire were Subjective Norm, AWE Self-Efficacy, AWE System Anxiety, System Characteristics, and Cognitive Feedback. These sections were believed to not align with the research objectives. Additionally, the items of Cognitive Feedback were altered to be under the section of Perceived Ease of Use, along with the original item of "I find AWE easy to use" from the original section. The item of "AWE offers flexibility in writing as to time and place" was removed from the deleted section of System Characteristics and added to the section of Perceived Ease of Use. Also, an item from the Facilitating Conditions section was erased, thus, keeping the section with only two separate items, as it was believed by one of the teachers that the deleted item does not align with the intended objectives.

Furthermore, the name of the section of Perceived Usefulness was kept, and new items were added from the works of Ariyanto et al. (2021) and Parra & Calero (2019). Additionally, in response to suggestions from two experts in the written expression module, additional items about the assessed components of the writing skills were also incorporated. Moreover, two sections were entirely added to the questionnaire, Autonomy and Motivation. These sections were adapted from the works of Wang et al. (2012) and Wilson & Czik (2016). An item from the previously deleted section of Cognitive Feedback, "Using AWE feedback enables me to be more engaged in writing", was kept and added to the Motivation section, as it was believed to suit this section more. Finally, the section about Behavioral Intention was kept without any modifications.

After making these changes, a second attempt to consult the same teachers was taken. At this stage, the wordiness and level of difficulty were assessed, and several other comments were suggested to reach the final version of the questionnaire. The wordiness of some items was suggested

to be altered. For instance, instead of "AWE is reliable," it became "I can rely on AWE," and instead of "the information security of AWE is creditable," it became "AWE keeps my personal information safe." These procedures were taken to ensure the clarity and suitability of words for students' level. (see Appendix P). Moreover, one of the teachers suggested keeping the references from which the items were taken in the margin for more credibility of the questionnaire (see Appendix O) .

2.6.4.2 **The Post-treatment interview:**

While questionnaire surveys are relatively easy to administer, they have several limitations, mainly in their inability to accommodate flexible or detailed types of responses. Interviews are more effective for explaining topics that entail deeper insights and elaboration (Walliman, 2011). Interviews are highly adaptable and can be applied in a wide range of research contexts to collect information from participants. There exist several types of interviews, yet the widely used ones are those determined by their degree of structure, as they vary from completely structured to utterly unstructured (Leavy, 2017). Structured interviews comprise the use of standardized questions that the interviewer asks based on a predetermined schedule and are often required to be answered in a closed format. In contrast, unstructured interviews are more flexible and are guided by a general outline of questions that allow the interviewer to freely direct the conversation. This enables the interviewee to express his attitudes and thoughts in more depth without relying on closed ended questions. Semi-structured interviews allow a balance between flexibility and a rigorous structure by combining aspects of both types. They include a mix of standardized and open- ended questions (Walliman, 2011). Thus, to maintain such balance, a semi-structured interview is opted for in this study.

2.6.4.2.1 *Discription of the students post treatment interview:*

Despite being time-consuming, prone to bias, and less standardized (Gorvine et al.,2017), the semi-structured interview was conducted to collect rich and detailed qualitative data about students' perceptions of the used AWE tool to enhance their writing skills. For this reason, seven questions were addressed to cover four main themes: the overall impressions and perceptions of the AWE tool used in the study, the perceived effectiveness and usefulness of the tool in improving their writing abilities, their autonomy and motivation towards using the tool, and their future intentions for using the tool. (see Appendix Q)

The first theme of the interview focuses on the participants' initial impressions and general opinions and attitudes about the tool. The theme attempts to gain more insight into its strengths and weaknesses as well as the role it plays in the writing process by inviting participants to introspect and reflect on their experience after using the AWE tool. Thus, it provided an opportunity for analyzing how students viewed the tool as a whole, whether positively or negatively. This was addressed through a single question that views the students' evaluation of the tool of Automated writing evaluation of virtual writing tutor.

The second theme, the perceived effectiveness and usefulness in improving writing skills, discussed in a greater detail how the tool affected participants' writing abilities. This theme consisted of three interconnected questions that were designed to measure whether the tool has facilitated any improvements in specific components of the writing skill. The first question explored the perceptions of participants regarding whether the tool helped them improve their writing in general and improve individual writing components in specific. The second question investigated the impact of the AWE tool on the writing skills of the participants in terms of grammar, vocabulary, mechanics, content, and organization. This question played an important role in knowing which areas of writing changed

with the tool and whether the received feedback was indeed effective. Finally, the third question examined whether the participants had incorporated the feedback into their final drafts. This helped to determine whether the feedback was understood and utilized effectively. This offered an insight into how participants engaged with the tool in their revision process.

The third theme is related to the general impact of the AWE tool on participants' autonomy and motivation when performing writing tasks. Two questions were used in this theme. They inquired whether the tool made the participants more autonomous in writing and whether it made them want to be more engaged with writing activities. The first question investigated whether the tool reduced participants' reliance on teacher's feedback by equipping them with the skills and confidence to evaluate their work. This was particularly pertinent to whether or not the tool was capable of generating long-term writing autonomy. The second question established whether the tool served as a motivational factor by encouraging participants to write with greater frequency or enthusiasm. Through the examination of these issues, this theme established how the AWE tool would be capable of affecting not only the mechanical aspects of writing but also the attitude and confidence of its users.

The fourth and last theme, on future plans for using the tool, addressed the future attitudes of participants towards the use of the AWE tool. The theme comprised a single question about participants' willingness to apply the tool in the future and an inquiry into why they made this choice. This theme was important in determining the perceived stability of the tool and its likelihood of being used by participants in their future writing habits. The comments also explain what affected their decision, e.g., the ease of use of the tool, the quality of the feedback received, and the degree to which the feedback was aligned with their own writing requirements.

2.6.4.2.2 *Piloting the interview:*

Before conducting the interview, three experts in the field of research methodology were consulted. The research question and the themes of the interview were presented to them to provide a general understanding of the purpose of this data collection tool. The feedback on the wording of some questions was taken into consideration. For instance, the second question that is originally phrased as "Did it help you improve your level? How?" was advised to be rephrased as "Did the tool help you improve your writing skills level? How?" in order to remind students that the main topic of the interview is about the AWE tool that was used in the treatment. Moreover, the third question was recommended to be revised into "Did the tool provide helpful feedback in the following areas of the writing skill components: grammar, vocabulary, mechanics (spelling and punctuation), content, and organization?" .This was for the purpose to ensure a more understanding of the feedback provided by the tool.

Similarly, the fourth question was suggested to be worded as "Did you take the feedback provided by the tool into consideration when preparing your final draft?" instead of "Did you take the feedback it has given you into consideration when you made your final draft?" in order to clarify the source of the feedback and how it was used in the writing process. The sixth question was revised from "Did you feel motivated to write with the use of the tool?" to "Did using the tool motivate you to write more? Why or why not?" in order to explain the impact of this tool on their motivation or the lack of any impact. Finally, the last question which was initially stated as "Do you think you will use the tool in the future? Why or why not?" was reworded to "Do you intend to use this tool in the future? Why or why not?" in order to better understand participants' intentions rather than merely speculating on the possibility of future use.

2.7 Administration of the instruments:

The administration of the instruments refers to the systematic process of distributing research tools to the participants of the study. Outlining this process is essential for understanding the steps involved in completing the research materials. A detailed explanation of this process is discussed chronologically below.

2.7.1 Students' preliminary questionnaire:

After reviewing the literature and designing as well as piloting the research tool, the researcher self-administered the questionnaire to second-year EFL students in the English Department on November 13th and 14th, 2022. The students were randomly invited to participate in answering the questionnaire. A total number of 25 students completed the questionnaire items within a time span of 30 minutes (cf. Appendix D). The researcher remained present with the participants throughout the process to clarify any ambiguous questions and guarantee the truthfulness of the collected data. Due to time constraints and the unavailability of classrooms, the students completed the questionnaire, including the writing task, in various random settings. These students kindly agreed to volunteer in the completion of the questionnaire after explaining its objectives. Since the questionnaire was not the primary research tool, the researcher opted to randomly engage students outside the classroom to gather a broader range of responses.

2.7.2 Teachers' preliminary interview:

To further enrich the present investigation, a preliminary interview was conducted with seven written expression teachers from the same university where the research is being held. From November 20th to 24th, 2022 the researcher aimed to understand the problem from the teacher's point of view in order to have better perspectives about the existence of the issue being studied. The preliminary interview is semi-structured in nature and was held for a duration of approximately 20

minutes for each teacher. Due to time constraints, the interviews were conducted over the course of a week in various settings such as teachers' meeting room, empty classrooms, and lyceums, depending on convenience and availability. Concerning data collection, some teachers agreed to be tape recorded while two others refused regardless of guaranteeing the anonymity of their answers. Therefore, note taking was applied.

2.7.3 Placement test:

In December 2022, both the experimental and control groups undertook the same placement test with its two versions (A and B) and an answer sheet. Each test contained 100 items with four options for each question. The experimental group took their test on the 4th of December at 8 a.m. in room 22, while the control group took theirs on the 5th of December at 11 a.m. in the same room. Before administering the test, the researcher informed the participants that they would be part of a PhD research sample. Also, their consent to participate in the research was undertaken. The participants were then informed about the aim of this test, which is to discern their overall linguistic competence. They were assured that this test was not part of their grades; thus, incorrect answers were welcomed to have more authentic results. Accordingly, students were given 30 minutes to complete one of the versions. The researcher self-observed the students during the test in order to confirm the reliability of the test and prevent any cheating attempts.

2.7.4 Pre-test:

The pretest was administered to both groups after the end of the exams of the first semester and the beginning of the second semester. After obtaining the consent from the department to conduct the experiment, the researcher provided the pretest to both groups. On February 5th, 2023 students of the experimental group were given the pretest at 8. am in their regular session in room 22 in the Department of English. Similarly, students of the control group took their pretest on the

6th of February at 11 am. It is worth mentioning that the session of written expression was the first for both groups in their time schedule, so there were no other modules that could interfere with their knowledge. Additionally, the control group students started their first session of the week on Monday. Thus, there was no opportunity for interaction between the two groups and sharing information about the content of the pre-test. The pretest lasted approximately about 90 minutes as they were provided with enough time to complete their answers. Before submitting the test, the researcher explained the purpose of the test. However, only the experimental group had an explanation about the procedures of the treatment for the coming weeks and were asked to sign their consent to be part of the research on a piece of paper.

2.7.5 Progress test:

The main purpose of providing the progress test to the experimental group was to assess the extent to which the treatment of using automated feedback evaluation has any tangible impact on students' writing skills. Thus, this progress test was part of the second-semester quiz. The rationale behind implementing it as a quiz is to ensure attendance and the seriousness of the students and that they would provide authentic and profound answers. The test took place on the 30th of April, 2023 during their regular sessions. The progress test helped to confirm the elimination of any confounding variables along the treatment process. Therefore, it ascertained and supported the validity of the research.

2.7.6 Post test:

After the end of the intervention, the entire research sample, with a total number of 84 students, completed the posttest. The posttest was conducted as the final exam of the second semester. It was administered on the 20th of May, 2023, at 9:45 am. The control group took the exam in amphitheater number 13, whereas the experimental group took it in amphitheater number

11. The posttest lasted for 90 minutes, which provided students with enough time to apply the skills and concepts they had acquired during the study period. The rationale behind including this test as the final exam was to ensure that both groups set the exam on the same day, thus increasing the authenticity of the knowledge assessment and ensuring the homogeneity of test conditions.

2.7.7 Post treatment questionnaire:

On the same day after the administration of the posttest on the 20th of May 2023, only students from the experimental group were asked to answer the post-treatment questionnaire. Students were informed while they were setting for the test to wait for a meeting in room 22. The entire group consisting of 44 students assembled in the designated location. The completion of the post experiment questionnaire took approximately 15 minutes. The purpose of the tool was explained which was to gather their perceptions about the use of automated feedback evaluation tool that is represented in the website of virtual writing tutor to improve their writing skill. The researcher self-administered the questionnaire and was available to answer any inquiries and clarify any ambiguous items. The questionnaire was group administered in order to ensure that all the questionnaire sheets are returned and authentically answered. The participants were then thanked for their immense collaboration during the semester and were wished a pleasant day.

2.7.8 Post treatment interview:

After the correction of posttest copies, the test results were provided on the 4th of June 2023 in an organized session by the administration. This was an opportunity for the researcher to re-meet the students and finish interviewing the participants of the experimental group. The rationale behind conducting the interview after obtaining the test results is to be able to select the students who would set for the interview. A list of potential interviewee names based on their achievement on the test was purposefully selected. The selection was based on having three students with the highest score,

three with the lowest score, and three with average scores. Nine students among those selected from the list volunteered to be interviewed after the end of the consulting session that was held at 8 am on Amphie 10. The nine students were then escorted to an empty room and were individually interviewed. The researcher first explained the purpose of the interview and guaranteed the anonymity of the responses. They were informed of the time frame before setting for the interview. The latter lasted for approximately 15 to 20 minutes for each student. The students were encouraged to take their time in answering the questions. The purpose of not opting for a group discussion was to ensure that each student had privacy and could freely articulate their responses about their perceptions of the research treatment process, without being influenced by their peers' opinions.

2.8 The experiment:

In order to test the hypothesis and answer the research questions, the implementation of the independent variable in the form of the treatment is paramount in deriving actionable steps towards data collection. to evaluate the effectiveness of automated writing evaluation (AWE) tools on students' writing, a specific tool from this category was chosen. The Virtual Writing Tutor (VWT) is an online essay checker that is designed to provide feedback on various aspects of the writing skill including: grammar, vocabulary, punctuation, coherence (see Appendix K and L). It is powered by ConverSolo Inc and it is associated with AI revolutionary in language learning (Walker, 2023).

2.8.1 Virtual Writing Tutor Choice Rational:

The rationale behind choosing this website is based upon several reasons related to its features. These features could be listed as follow:

2.8.1.1 Designed for ESL Learners

First, the Virtual Writing Tutor website is created by Nicholas Walker, an ESL teacher at Ahuntsic College in Montreal, Quebec, Canada. Based on his experience, after spending years

correcting students' drafts, he designed and tailored this tool specifically to meet ESL learners' needs (Walker, 2023). This tool offers a control over the capacities of AI that could potentially hinder students' engagement and productivity. It focuses on providing personalized feedback suitable for students' level rather than generating paragraphs for them, which might lead to cheating and over-reliance on the technology and ultimately undermining students' writing skills (Mikolosko, 2023); This makes the Virtual Writing Tutor tool one of the rare grammar checkers tailored to the needs of non-native speakers, distinguishing it from other general grammar checkers available on the internet (John & Woll, 2020).

2.8.1.2 Free of Charge

Another major advantage of the Virtual Writing Tutor is that it is completely free to use. Unlike premium grammar-checker services such as Grammarly, which restricts advanced feedback for solely paid subscribers, the Virtual Writing Tutor offers unlimited access to feedback without any financial constraints (Walker, 2023). This makes it extremely convenient for students who cannot afford expensive writing software, which ensures an equal opportunity for learning for all users. The high cost of AWE systems is a common drawback, as many of them are unaffordable and impossible to use, even for teachers (John & Woll, 2020). Thus, the Virtual Writing Tutor offered a feasibility for free access to all students.

2.8.1.3 Lack of Automated Error Replacement

In contrast to some grammar checkers that automatically replace incorrect words or structures, the Virtual Writing Tutor does not permit immediate and automated replacements of errors. Instead, it requires students to actively engage in the process of correcting their mistakes through scrolling down to review the feedback and manually replace and refine their drafts. Walker (2022) emphasizes that “When learners scroll down to read the correction advice and then scroll up

to make the correction, I believe that there is a better chance that they will remember the correction in the future.” This method ensures that students do not passively accept corrections but rather internalize the feedback and learn from them which leads to long-term improvements in their writing skills.

2.8.1.4 Flexibility of Access:

Virtual Writing Tutor is easily accessible from a variety of devices, including desktops, laptops, tablets, and mobile phones. This ease of access is highly suitable for inclusion inside classroom in this research. Students can utilize the tool in class via their mobile phones or on the computers of the university internet labs. Furthermore, the Virtual Writing Tutor does not require students to register with a personal account to use its features. This optional login system removes the boundaries and provides an uninterrupted user experience for the students who do not like the burden of registering.

2.8.1.5 Categorization of Feedback:

The Virtual Writing Tutor provides separate feedback categories for different aspects of writing, including grammar, punctuation, vocabulary, topic sentences, cohesion and overall writing quality. This feature is very suitable and practical for the objectives of the current probe since the scoring rubric of this research focuses on these writing components individually. Accordingly, by compartmentalizing feedback into distinct categories, the Virtual Writing Tutor allows students to accurately determine their weaknesses and correct them in a logical manner. Additionally, the Virtual Writing Tutor delves deeper into identifying errors that other conventional spellcheckers cannot, such as collocation errors, quantifier errors, verb agreement and adjective agreement errors, run-on sentences, comma-splices, and dangling participles (walker, 2023).

2.8.1.6 Formative and direct feedback:

Virtual writing tutor software provides a formative and direct feedback and offers meaningful explanation of the students' errors. The decision to use an automated feedback assessment tool with such features is based on several studies. Chandler (2003) highlights the major role played by direct corrective feedback in enhancing students' writing skill, noting that the feedback helps enhancing accuracy in their ongoing writing as well as build better writing skills in future assignments. Brookhart (2018) also contends that among the most effective learning resources for students is formative feedback, highlighting its importance in effective instruction. Nunan (2003) also stresses the importance of providing meaningful and direct feedback to facilitate learning. Unlike general grammar-checking tools such as Grammarly, this tool is specifically designed for pedagogical purposes. It not only identifies errors but also provides explanations tailored to each student's mistakes. Students are then required to modify these errors themselves since the tool does not automatically correct them. However, in addition to formative feedback, the tool also gives summative feedback. The Virtual Writing Tutor, for example, assesses students' general range of vocabulary and the writing level. It gives measurable information, which can be used as a motivational factor. By tracking their progress over time, students may feel encouraged to actively engage in the revision process.

2.8.2 The implementation of the treatment:

The researcher did not alter the content of the lessons in the treatment but adhered to the syllabus prescribed by the Ministry of Higher Education and remained consistent with the official curricular's requirements. The study implemented the process approach to writing, which aligned with the objectives of the research. The structure of the treatment was implemented according to the following pattern.

Each week, students attended two sessions with each lasting an hour and a half. The first session, taught in a form of a lecture, focused on providing theoretical instruction about common features and types of paragraph writing. This included a description of the process of writing a paragraph, as well as a discussion of the structure of each type. The second session of the week took place in the TD classrooms. They involved practical exercises and training to apply the theoretical concepts. During these sessions, students were required to compose a paragraph based on text models and paragraph prompts found on the handouts that were provided by the researcher. Hyland (2007) inspired the decision by stating that acquainting students with models of writing and with explicit instructions of the characteristics of each paragraph genre is crucial in helping them learn to apply this type of writing. Lesson plans and handouts are shown in (Appendix S).

2.8.3 Structure of the treatment:

The reoccurring pattern of the process of the treatment began with a brainstorming stage where students generated ideas on a separate sheet of paper delivered by the researcher (see Appendix G). At this level, the teacher provided content and organization feedback, engaging students in the discussion about the quality and structure of their ideas. After this stage, students typed their first draft on the Virtual Writing Tutor (VWT) website and reviewed the feedback generated by the tool. They were then required to categorize the errors detected by the VWT on the table provided on the same sheet. This table contained classified columns of writing components (content, grammar vocabulary, spelling, punctuation). An example of students' paragraph sheets is shown in Appendix G. This procedure followed the recommendations of Cheung (2016) in stressing the importance of students keeping records of their recurring errors to improve their retention and error correction. Students then recomposed their final draft on the back of the same sheet where they recorded their brainstormed ideas and classified the committed errors. Finally, they revised their

work before submitting it to the researcher. Afterwards, these final drafts were reviewed to see if students had effectively implemented the recommended feedback. This task compelled the students to actively go through the revision process and not passively rely solely on the automatic feedback.

After providing the pretest, the first session on February 12, 2023, was a step-by-step introductory workshop on how to use the Virtual Writing Tutor. Students were escorted to the Internet laboratory, where each student could use a personal computer to test the website. To enable the participants to use the tool independently, the researcher had also created a video tutorial, which was posted in a Facebook group created for this purpose as a secondary reference point. Once it was confirmed that students were aware of how to use the tool, they were then instructed to open the website on their mobile phone and use it in the classroom. Prior to the treatment, the researcher ensured the students' possession of mobile phones. Internet was then shared by the teacher and other classmates to allow those who do not have internet connection to access the website via their mobile phones. Each student was required to work independently and focus on their own progress in correcting errors without interacting with other peers. The following table demonstrates the time span of the treatment:

Table 2.3*Time span of the treatment phase*

Week	Date	Time and Location	Dession discreption and paragraph prompts
1	5 Feb 2023	8 AM, Room 22	Pre- test
2	12 Feb 2023	8 AM, Internet Lab	Workshop
3	26 Feb 2023	8 AM, Room 22	Discreptive paragraph1
4	5 Mar 2023	8 AM, Room 22	Discreptive paragraph1
5	12 Mar 2023	8 AM, Room 22	Cause and Effect paragraph 1
6	19 Mar 2023	8 AM, Room 22	Cause and Effect paragraph 1
7	2 Apr 2023	4pm Online	Paragraph practice
8	9 Apr 2023	8 AM, Room 22	Argumentative paragraph1
9	16 Apr 2023	8 AM, Room 22	Argumentative paragraph 2
10	23 Apr 2023	8 AM, Room 22	Compare and contrast 1
11	30 Apr 2023	8 AM, Room 22	Progress test
12	7 May 2023	8 AM, Room 22	Compare and contrast2
13	14May 2023	8 AM, Room 22	Narative Paragraph
14	20 May 2023	9:45 AM, Amphitheater 11,13	Post- test

2.8.3.1 Control group:

As for the control group, no intervention was implemented. The sessions followed the same process approach to writing where students brainstormed, drafted, edited and finalized their paragraphs. They also received theoretical instruction on paragraph types. However, the teacher guided the session without the intervention of the Virtual Writing Tutor. The teacher was the only source of feedback available inside the classroom. The number of paragraph writing practices depended on the pace of students' ability to revise their drafts that the teacher corrected. As students frequently requested feedback, the teacher had to address their concerns, which reduced the time available for additional writing tasks. Consequently, paragraph practice was relatively shorter than in the experiment group.

2.9 Data Analysis procedures:

Data analysis is a paramount process that exegetes the raw untreated data through deciphering the numerical, written, or uttered information into inferences (Gorvine et al., 2017). It

is essential in determining the findings, answering research questions, and supporting or refuting the hypothesis (Leavy, 2017). The current scrutiny endorses the mixed method approach, where quantitative data is analyzed using numerical data, serving as the primary evidence for the research. In contrast, qualitative data underwent analysis using themes and codes, serving as supplementary and explanatory research materials. Below is a detailed explanation of the processes undertaken to analyze the data derived from the various phases of data collection.

2.9.1 Analysis of Quantitative Data

The quantitative data obtained from the placement test, pre-test, progress test, and post-test, along with the post-treatment Likert scale questionnaire, are analyzed using the Statistical Package of Social Sciences (SPSS). Determining the suitable statistical test is intertwined with the type of the collected data, whether parametric or non-parametric (Walliman, 2011). Parametric data entails having ratio or scales data, while non-parametric data entails having nominal or ordinal scales (Gorvine et al., 2017). For the current probe, two types of parametric statistical tests were chosen given the nature of the experiment test scores and the interval scale derived from the post-treatment Likert scale questionnaire. Thus, both inferential and descriptive statistics were used.

Descriptive statistics merely describe and provide an information summary about the data without providing any inferences (Fallon, 2016). Univariate analysis, which examines the characteristics of a single variable at a time, relies solely on descriptive statistical tests to summarize and interpret data (Walliman, 2011). Within this type of univariate analysis, there exists three key measures of descriptive analysis: Frequency distribution, including frequencies and percentages; measures of central tendency, encompassing the mean, median, and mode; and measures of dispersion and variability, including standard deviation (Fallon, 2016). In this research, the Likert scale, which is treated as an interval scale rather than ordinal data, is analyzed using descriptive

statistics. Additionally, the placement test scores are described and summarized in terms of frequencies and percentages and represented in charts. Similarly, the frequency distribution of the test scores from the experiment phase tests was also taken in order to provide a general overview of the students' performance.

On the other hand, inferential statistics help evaluate hypotheses and draw conclusions about the population under scrutiny (Kothari, 2004). There exist several types of inferential statistics tests, including the independent t- test, paired t- test, and analysis of variance (ANOVA) (Walliman, 2011). The choice of these statistics depends on the research objectives and the nature of the data being analyzed. In this study, the effectiveness of the experimental intervention was primarily assessed by comparing the mean of pre-test and post-test scores to view the existence of any statistically significant differences. The differences between the control and experimental groups were analyzed using the independent sample t-test since the scores from the control group are unrelated to and independent from those of the experiment group. In contrast, differences within each group, comparing each group's pre-test and post-test scores, were examined using paired-sample t-test since the derived data stems from the same measure and are linked and paired. The results were then converted and visualized through graphical representation for more explicit interpretation.

The most crucial part of the research is to answer the research questions and reject or accept the null hypothesis. That is to say, this involves assessing the extent to which the observed results could have occurred purely by chance or as a result of the treatment. These inferences can be determined through conducting statistical tests and calculating the P- value. The p- value is expressed as a decimal ranging from 0 to 1 (Dahiru, 2008). In the decision upon whether to reject the null hypothesis, the researcher set a significant level represented by the Greek letter alpha α and

estimated by a threshold which estimated by 5% or (0.05) (Gorvine et al., 2017). If the P-value is equal to or lower than 0.05, it suggests that the results are unlikely to have occurred by chance leading to the rejection of the null hypothesis in favor of the alternative hypothesis. However, if the P- value exceeds 0.05, the results are considered not statistically significant, which means that they could have occurred by chance; thus, the null hypothesis is not rejected.

2.9.2 Analysis of Qualitative Data:

Qualitative data is different from quantitative data in its richness and density. That is why it is often regarded as a laborious process for the researcher to analyze. Due to the fact that the data derived from interviews are often subjective and could be interpreted differently by different researchers, some procedures could be taken in an attempt to analyze them. According to Levy (2017), there are five main phases of data analysis and interpretation that include: data preparation and organization, initial immersion, coding, categorizing, theming, and interpretation. The first step, data preparation, involves transcribing or organizing the data for easier access and analysis. Initial immersion helps researchers familiarize themselves with the data by reviewing, reflecting, and taking notes. Additionally, coding is the process of assigning labels to data segments, which can be done manually or with software. Moreover, categorizing and theming involve grouping codes into meaningful patterns. Finally, interpretation seeks to answer the question, "So what?" by identifying patterns, making connections, and using triangulation techniques to validate findings. However, these processes are not rigorously linear and often overlap in a recursive cycle (Levy, 2017). Additionally, due to its rich nature, not all the information found in this data could be used; thus, it needed to be winnowed through focusing merely on some of the important data while disregarding the other parts (Creswell & Creswell, 2022b).

For the current probe, students' interview responses are coded and grouped into themes through repetitive reading in order to identify recurring patterns and ensure accurate interpretation of the data. This process was conducted to answer the last research question; which focuses on identifying students' perceptions about the effectiveness of using Automated Writing Evaluation tools to improve their writing skills.

2.9.3 Analysis of Paragraph Corpus:

The extracted paragraphs that were collected from students during the intervention and pretest, progress test, and post-tests were analyzed to answer the second research question about which writing aspects have developed more after the integration of Automated Writing Evaluation technology. Thus, an error analysis method was conducted on the corpus of students' writing paragraphs to track any significant development and determine whether that development, if it existed, was a result of using the Automated Writing Evaluation tool or was related to other extraneous variables. Student errors were identified, categorized, countified, and then descriptively analyzed.

2.10 Ethical considerations:

Ethics are pivotal in educational research endeavors as they deal with human subjects. Therefore, several ethical considerations were undertaken to ensure the morality and reliability of this study. Prior to conducting the experiment with second-year students, an administrative permission was signed by the head of the department to undergo the research within the department's territory. (see Appendix A). Afterwards, a consent letter was distributed to be signed before administering the research tools to the research sample (see Appendix B). The participants were assured the total liberty to abstain from participating in the study. An explanation of the research objectives and procedures was delivered to ascertain that the participants fathom their specific roles

in the research. Moreover, students were guaranteed the anonymity of their data, be it their personal information, interview responses, or grades. They were also informed about the ability to withdraw at any time and any stage of the research without any penalties affecting their final academic grades. Finally, research ethics were accentuated by restraining from altering the collected data or intervening with the obtained results to serve personal research objectives.

2.11 Limitations of the study

The present study encountered a number of limitations since it belongs to soft sciences which deal with human beings rather than to natural sciences such as physics and chemistry. Some pre-existing differences between the experimental group and control group may appear due to the inability to randomly select students to belong to one of the groups. The current study investigates the impact of automated writing evaluation technology on student's writing skill inside the classroom. However, it is out of the researcher's control that the students use this technology at home which might affect the overall results and, consequently, the reliability of the study.

2.12 Delimitations of the Study

The scope of this study is limited mainly to the sample which is second-year students at the department of English language and literature at Mohamed Lamine Debgline Setif 2 University. Moreover, the operational definitions of key concepts deployed in this investigation might delineate the research boundaries.

Conclusion

This section discussed in elaborated details the procedures taken for conducting the current research. The theoretical underpinnings that grounded the decisions undertaken in each stage of the inquiry were demonstrated, starting from the selected research paradigm, approach, and design to

data collection and analysis methods. A description of the piloting procedures of the instrument was provided. Additionally, research population and sampling procedures along with students' background information were also stated. Furthermore, the rationale behind choosing the virtual writing tutor and the structure of the treatment was explained. Finally, ethical considerations and limitation of the study were presented. The following chapter will present the analysis of the collected data.

Chapter Three: Data Analysis and Interpretation	134
Introduction	134
3.1 Analysis of Exploratory phase	134
3.1.1 Analysis of teachers' interview:	134
3.1.2 Analysis Students pre-questionnaire:	138
3.1.3 Verifying the homogeneity of both groups	143
3.2 Analysis of Experimental Phase:	152
3.2.1 Verifying the efficacy of the treatment comparing post test results of both group	152
3.2.2 Performance of the experimental group in the Quazi experimental phase:	154
3.2.3 Performance of the Control Group in the Quazi Experimental Phase:	161
3.2.4 Verifying Improvement in Writing Skill Components	168
3.2.5 Evidence of Improvement from Students Corpus Paragraphs	175
3.2.6 Development in content	187
3.3 Analysis of post-experimental phase	190
3.3.1 Questionnaire analysis:	190
3.3.2 Analysis of Student's Interview:	201
Conclusion	

3 Chapter Three: Data Analysis and Interpretation

Introduction

This current chapter is allocated to data analysis of the results gathered from the various instruments used in different phases of the study. The IBM SPSS Statistics is used for the analysis of quantitative data. First, the analysis of the data gathered at the exploratory phase includes analyzing the students' pre-questionnaire and the teachers' pre-interview to verify the existence of the problem within the study context. Moreover, the placement test and pre-test results are analyzed to ensure the homogeneity of the sample. Second, the quantitative data gathered in the experimental phase are presented, including the descriptive statistical and inferential results related to students' performance in the pre-test and post-test. Additionally, this chapter provides a description of the results from students' post-questionnaire and the qualitative data derived from the students' interview.

3.1 Analysis of Exploratory phase

This section includes an analysis of both preliminary research tools. The students' preliminary questionnaire and teachers' preliminary interview are presented below:

3.1.1 Analysis of teachers' interview:

The semi-structured interview was conducted with seven instructors in charge of the Written Expression module. The general aim was to obtain an in-depth understanding of the writing problems faced by students, the reasons for such writing problems, the importance of teacher feedback, and the educational strategies used by instructors to enable improvement in writing

proficiency. Data were systematically categorized, with direct quotes from the instructors, to facilitate understanding.

In the first question, teachers were asked to evaluate their students' writing level by the end of second year. The majority of instructors assessed their students' writing abilities as below the standard level, while only a few reported that some students demonstrated adequate proficiency. Teachers generally described their students' writing as "*weak to average*" (Participant 3) or "*below that which is expected on this level*" (Participant 1). One teacher added that "*many still struggle to achieve sentence structure and coherence, and few are capable of achieving well organized paragraphs*" (Participant 5). These responses highlight a widespread perception that by the end of their second year, learners have not yet developed the necessary writing abilities that are expected at this level, particularly in terms of structure and coherence.

The second question explored the common challenges faced by students when writing. Among these issues, teachers pinpointed major difficulties such as grammatical correctness, insufficient vocabulary, organizational deficits, and inadequate elaboration of ideas. A teacher said, "*most learners face serious problems regarding their vocabulary and grammar,*" and added that "*though they have good ideas, they are not capable to elaborate on them well in writing*" (Participant 7). In addition, another teacher mentioned that "*they have difficulty in structure transition, supporting ideas, and conclusion. Also, transitions between ideas are missing*" (Participant 3). These responses suggest that students face not only linguistic difficulties but also cognitive challenges in academic writing, particularly in creating logical flow and constructing cohesive arguments.

The underlying reasons for the difficulties experienced by the students were mostly attributed to the intersection of inadequate writing experience, poor reading habits, and scant guidance about the writing process. Teachers repeatedly stressed the lack of proper preparedness by the students before they came to university. For example, one teacher said, *“They barely write at high school, so they come here with low level”* (Participant 4), while another teacher indicated *“they have limited writing experience, and they also don’t read that much so they, if I may say, developed poor reading habits which resulted in poor basic knowledge about writing over the past few years”* (Participant 7). Moreover, another participant reinforced the difficulties involved in superficial memorization, stating that *“students are more occupied in remembering than thinking critically or creatively”* (Participant 1). These statements highlight the omnipresent nature of this phenomenon; namely, students come into their higher education endeavors with underdeveloped writing and analytical abilities, often nurtured by previous educational practices.

Furthermore, when they were asked about whether they believed the challenges faced by their students in writing stemmed primarily from personal or educational factors, most instructors cited educational deficits as the underlying cause affecting student performance. One teacher indicated that *“the curriculum doesn't put enough emphasis on writing, and classes are usually too large to give learners enough attention”* (Participant 1). Another teacher added that *“writing is usually not focused on in earlier classes, and even in university, more emphasis is put on reading or speaking. Writing is just an assessment measure”* (Participant 2). Whereas individual difficulties such as low levels of motivation and self-efficacy were recognized by specific participants i.e., *“many are afraid to write because they believe they would fail”* (Participant 3).

Concerning the feedback practices, educators typically provide feedback both in written and oral form due to time constraints. One teacher explained: *“I make comments on their drafts, mainly on content, structure, and grammar. Because of time, I just ask few students to go on the board and read aloud, so then I spot some errors and correct them on spot”* (Participant 1). The other participants also reported similar restrictions, such as Participant 2, who said: *“I give written feedback, occasionally supplemented by oral explanation in class... but I’m under time constraints.”*

Although feedback is provided despite time and class-size limitations, its effectiveness ultimately depends on how students engage with it. There was a consensus among the participants that the feedback is effective when learners participate in it, yet this activity is often not happening with their learners. As one teacher explains, *“Feedback can be very helpful when learners read it properly. But many of them just skim through to look for the grade and not the feedback”* (Participant 6). Another teacher said, *“Feedback is effective for motivated pupils. But many others simply don't act on it, so the same mistakes keep appearing and sometimes I feel discouraged to even bother providing it”* (Participant 2). As such, while teachers spend time providing feedback, the learning effect of this feedback is greatly diminished when students lack the necessary skills or motivation to use it effectively.

Moreover, several problems have come to be recognized as hindrances to the effective use by students of feedback. One such common problem is related to linguistic issues. As Participant 1 put it: *“Some students don't understand the feedback because it is too general or because it is in English.”* Another teacher added: *“Some students feel frustrated or intimidated when they get so much feedback corrections because they weren't used to it”* (Participant 2). The findings suggest a need for more training for students in how to interpret and respond to feedback, as well as a more

systematic way of providing feedback that is sensitive to the linguistic capacities and emotional responses of students.

Finally, in terms of pedagogical practices used to improve students writing, teachers reported an array of practices they try to incorporate to promote their students' writing abilities. These practices included guided writing exercises, brainstorming exercises, peer feedback processes, model writing processes, reflective exercises, and revision strategies. Participant 1, for example, said: *"I usually try to do guided writing with them, and I also ask them to brainstorm ideas before starting. When time allows, I encourage them to give each other feedback, and sometimes I show them how to achieve a task by giving them sample texts."* Participant (4) reported the use of portfolios in conjunction with peer review by commenting, *"I ask my students to keep a portfolio to keep track of their writing and progress. I also include peer review because learners can learn and benefit from each others."* Their responses provide evidence that technology is not integrated in their teaching practices, and the persisting deficiency in students writing skill may call for more innovative pedagogical practices.

3.1.2 Analysis Students pre-questionnaire:

The preliminary questionnaire, administered to second-year EFL students, attempted to explore the encountered challenges in writing skill. The results revealed an interplay of cognitive, affective, instruction-related, and linguistic factors that hinders the writing progress of the students. After the examination of individual questionnaire items and their corresponding mean values and standard deviations, several common issues were revealed. Those are presented in thematic form to highlight key concerns.

Table 3.1*Descriptive analysis of students' preliminary questionnaire*

Statements	N	Min	Max	Mean	Std. Deviation
1 I find most writing tasks difficult to do.	25	1.00	5.00	4.04	1.02041
2 I do not have sufficient linguistic knowledge.	25	1.00	5.00	3.96	1.00084
3 I do not have sufficient content knowledge.	25	1.00	5.00	3.84	1.01573
4 I do not have enough general knowledge about the topics.	25	1.00	5.00	3.64	1.10489
5 I have low self-confidence toward writing tasks.	25	1.00	5.00	4.00	1.06719
6 I have great anxiety when writing because I fear my teachers' judgment about my mistakes.	25	1.00	5.00	4.04	1.00084
7 I do not write because I think I will not need such writing in future.	25	1.00	5.00	3.08	1.26491
8 I do not have enough motivation to write.	25	1.00	5.00	3.44	1.16320
9 We do not have adequate writing activities to encourage us to write.	25	1.00	5.00	4.08	1.04978
10 I do not receive sufficient feedback from teachers.	25	1.00	5.00	3.92	1.06010
11 I do not receive enough writing instruction in class.	25	1.00	5.00	3.84	1.04667
12 I do not know enough writing strategies such as prewriting, drafting, or editing.	25	1.00	5.00	3.96	1.02041
13 I am unable to organize my thoughts while writing.	25	1.00	5.00	4.00	1.00000
Valid N	25				

3.1.2.1 Perceived Writing Difficulty and Linguistic Constraints

Among the most pervasive outcomes from the questionnaire was the high prevalence among the students that writing was generally difficult to accomplish. Measured by item "I find most writing tasks difficult to do" ($M = 4.04$, $SD = 1.02$), this indicates that writing is regarded as a consistently challenging activity. This is supported by the following item "I find it difficult to express my ideas in writing" ($M = 3.88$, $SD = 1.12$), which indicates that the students not only find it difficult to accomplish writing tasks but find it difficult to present their thoughts effectively

These problems appear to be highly related to linguistic limitations. "I have problems using correct grammar when I write" demonstrated a relatively high mean value ($M = 3.96$, $SD = 1.00$), indicating the learners' failure to achieve grammatically accurate writing, an essential feature of academic writing. Similarly, the sentence "I do not have enough vocabulary to express myself clearly

in writing" indicated the same mean ($M = 3.96$, $SD = 1.00$), testifying that limited vocabulary is another prominent problem.

Collectively, these results lead to the conclusion that the students lack the linguistic devices necessary for effective written communication. Due to their linguistic deficiency, not having a strong command of grammar and vocabulary, writing becomes more mentally demanding. This extra effort makes the task feel harder and adds to their belief that writing is a difficult and tiring activity.

3.1.2.2 Limitations in Idea generation and content knowledge

Alongside language, the learners reported difficulty with idea generation for writing. The item of "I often don't have enough ideas when writing" reported a high mean score ($M = 3.84$, $SD = 1.01$), which suggests that idea generation is one issue that many learners experience. Item "I don't have general knowledge about the subject matter that we are asked to write about" was moderately high ($M = 3.64$, $SD = 1.10$), which affirms that insufficient knowledge about writing topics prevents learners from producing and elaborating ideas.

These responses reflect cognitive gaps that can be worsened by the lack of reading practice, lack of input in the lesson, or vague writing topics. Students who are asked to write about topics outside their experience or knowledge cannot create logical arguments or generate meaningful content. Shallow, underdeveloped writing is the result.

3.1.2.3 Perceived Affective Barriers to Writing Proficiency

Most of the participants also reported affective hindrances to their writing skill. For instance, the statement "I get nervous writing in English" had a high mean score ($M = 4.04$, $SD = 1.00$), indicating that writing is not just cognitively challenging but also emotionally challenging for the majority of the participants. Akin to this is the statement "I don't feel confident about writing" ($M =$

4.00, SD = 1.06), indicating that the majority of the participants internalize negative self-perceptions of themselves as writers.

The emotional aspect of writing issues can result in extreme consequences to learning. Anxious and insecure students are less likely to experiment, revise, or ask for feedback in which all these actions are crucial for writing skill improvement. Such emotions can be triggered by past experiences of failure, negative teacher criticism, or by classroom environments that are not designed to provide a secure environment for experimentation.

3.1.2.4 Motivation to Write and Perceived Value

For motivational purposes, there were mixed student responses. For the statement "I don't feel motivated to write," there was a fairly high mean ($M = 3.44$, $SD = 1.16$), indicating that students approach writing with reluctance or apathy. More insightful is the reaction to the statement "I think I will not need writing in the future," which had an approximately lower but still significant mean score ($M = 3.08$, $SD = 1.26$). It indicates the discrepancy between writing exercises in the classroom and students' perception about their future needs.

This utilitarian view of writing can lead to students to disengage from the writing process if they do not see it as relevant or applicable beyond the classroom. This has major implications for curriculum design: writing instruction needs to make more obvious links to academic, professional, and personal goals.

3.1.2.5 Limited Awareness of Writing Process and Instructional Gaps

One among the key issues revealed by the data was writing activity and awareness of the writing process among the students. Rated the highest across the questionnaire is "We do not have adequate writing activities to encourage us to write" ($M = 4.08$, $SD = 1.05$), reflecting the general

perception that writing practice in the classrooms is inadequate and insufficient. This is supported by the item "We do not receive enough feedback from teacher" ($M = 3.92$, $SD = 1.06$), indicating that the students are not guided and corrected sufficiently.

Gaps in instruction are reflected in how the writing process is understood by the students. Item "We are not taught how to plan, draft, and revise our writing" had a mean of ($M = 3.96$, $SD = 1.02$), reflecting that there are many students who are unaware of the general stages of effective writing. Finally, item "We are not taught how to write different types of paragraphs or essays" had almost the same mean ($M = 3.84$, $SD = 1.05$), reflecting that particular genres are not being instructed to the students.

These observations imply an extreme insufficiency in pedagogical practices: students are not adequately provided with the necessary practice and feedback chances to refine their writing abilities. Without excessive writing tasks and adequate assessment feedback from their instructors, students are not able to make progress. Without enough practice, their confidence and fluency are negatively affected, and without constructive criticism, uncertainty about correcting mistakes arises. Thus, writing remains to be an intimidating and frustrating challenge for many students.

3.1.2.6 Limitations in Idea Organization and content knowledge

Furthermore, the results also suggest that the majority of the students have difficulty with the organization of their ideas. A high mean score ($M = 4.00$, $SD = 1.00$) was recorded for the statement "I am unable to organize my thoughts while writing." This indicates that structuring content coherently is a common challenge. All these issues are brought about by numerous interconnected factors, including inexperience in procedural processes for outlining, lack of practice in logical order, and lack of knowledge about paragraph form.

These constraints are frustrating to students and lead to fragmented writing even when they have relevant ideas or vocabulary. Without specific guidance on planning and organization, these problems are sure to recur.

3.1.3 *Verifying the homogeneity of both groups*

Ensuring the congruence of pre-test results between the experimental group and the control group is essential for accurately identifying any disparities. Otherwise, a lack of initial similarity between the two groups may significantly undermine the validity of data extrapolation. Thus; any salient differences observed after the intervention could be attributed to the treatment itself rather than to prior discrepancies. Similarly, guaranteeing the **homogeneity** in terms of language level is determined by analyzing the placement test.

3.1.3.1 *Analysis of placement test*

This placement test is administered to the sample to measure their general English level and classifies them accordingly into five levels. These levels are shown in table 3.1 below.

Table 3.2

English Levels According to Placement Test

Score	0-9	10-25	26-45	46-65	66-85	86-100
Level	Beginner	Elementary	Pre-intermediate	Intermediate	Upper-intermediate	Advanced

Placement test descriptive statistics are displayed in the following table:

Table 3.3*Placement Test Descriptive Statistics for CG and EG*

Total score	General level	Control Group		Experimental Group	
		Frequency	Percent (%)	Frequency	Percent (%)
0–9	Beginner	0	0.0	0	0.0
10–25	Elementary	0	0.0	0	0.0
26–45	Pre-intermediate	0	0.0	0	0.0
46–65	Intermediate	14	37.8	9	24.3
66–85	Upper-intermediate	16	43.2	21	56.8
86–100	Advanced	7	18.9	7	18.9
	Total	37	100	37	100.0

Table 0.4*Frequency and Percentage Distribution of Placement Test Results for CG and EG*

Placement	Control	Experimental	Total	CG%	EG %
Intermediate	14	9	23	37.8	24.3
Upper-intermediate	16	21	37	43.2	56.7
Advanced	7	7	14	18.9	18.9
Total	37	37	37	100	100

The results of the placement test show that the control group consisted of 37.8% intermediate, 43.2% upper-intermediate, and 18.9% advanced students, while the experimental group included 24.3% intermediate, 56.8% upper-intermediate, and 18.9% advanced students. Although the experimental group had a higher proportion of upper-intermediate students and fewer intermediate students compared to the control group, both groups had the same percentage of advanced students.

Table 3.5*Chi-Square Test Results for Comparing CG and EG on Placement Test Performance*

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.763 a	2	0.414
Likelihood Ratio	1.773	2	0.412
Linear-by-Linear Association	0.687	1	0.407
N of Valid Cases	74		

NB: a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.00.

The Chi-Square analysis indicated that these differences were not statistically significant. The Pearson Chi-Square ($\chi^2 = 1.763$, $df = 2$, $p = .414$) tests whether the distribution of proficiency levels (Intermediate, Upper-intermediate, Advanced) is significantly different between the control and experimental group. Since $p = .414 > .05$, the difference is not statistically significant, and the conclusion is that the two groups did not differ in a meaningful way at the start. The Likelihood Ratio (G-square = 1.773, $df = 2$, $p = .412$) is another way of testing the same relationship. The result is almost identical to Pearson's Chi-square, with a non-significant p-value. The conclusion again confirms that there is no meaningful difference between the groups. The Linear-by-Linear Association ($\chi^2 = .687$, $df = 1$, $p = .407$) investigates the linear relationship among the ordered categories (e.g., if one group shifts toward higher or lower proficiency levels). With $p = .407 > .05$, there is no evidence of a linear trend between group and placement level. Finally, regarding the validity of the test, there were 74 valid cases (out of 75 total, with only 1 missing). Chi-square test indicate that students were homogenous in their proficiency level prior to integrating the treatment.

Ensuring the congruence of pre- test results between the experimental group and the control group is essential for accurately identifying any disparities. Otherwise, a lack of initial similarity between the two groups may significantly undermine the validity of data extrapolation. Thus; any salient differences observed after the intervention could be attributed to the treatment itself rather than prior existing variables

3.1.3.2 Analysis of Pretest score

Table 0.6

Descriptive Statistics of Control Group and Experimental Groups' Scores in Pre test

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Pre-test	C Group	37	8.8108	1.487	.227
scours	E Group	37	8.4865	1.487	.227

The descriptive statistics show that the control group ($n = 37$) achieved a mean score of 8.81 with a standard deviation of 1.49, while the experimental group ($n = 37$) obtained a slightly lower mean of 8.49, also with a standard deviation of 1.49. The relatively similar standard deviations suggest that the distribution of scores in both groups was nearly identical in terms of variability, therefore, supporting the presumption of equal variances between groups

Table 3.7

Independent T-Test of Pre-Tests for the CG and the EG

Pre-test scores	Levene's Test for Equality of Variances		t-test for Equality of Means					t-test for Equality of Means 95% Confidence Interval of the Difference	
	f	sig	t	Df	Sig. (2-tailed)	Mean Difference	Std.Error Difference	Lower	Upper
Equal variances assumed	1.487	.227	.386	72	0.701	.32432	.84047	-1.35113	1.99978
Equal variances not assumed			.386	69.391	0.701	.32432	.84047	-1.35221	2.00085

To test the assumption of homogeneity of variances, Levene's Test for Equality of Variances was conducted. The results yielded an F value of 1.487 and a significance value of ($p = .227$), exceeding the standard alpha threshold of 0.05. This non-significant result verifies that the assumption of equal variances remains intact.

The independent samples t-test for equality means yielded a t-value of 0.386, with 72 degrees of freedom, and a two-tailed significance (p-value) of 0.701. This p-value significantly exceeds the $\alpha=0.05$ level, suggesting that there is no statistically significant difference in pre-test scores between the control and experimental groups.

However, it does not suffice to solely view the global pre test scores to ensure the homogeneity of groups; rather this procedure must be done in tandem with the sub scores of the writing skill components. Thus, several independent sample t-tests were ran between the control and the experimental group.

3.1.3.2.1 Homogeneity in Content:

Table 0.8

Independent sample test group statistics of content scores for the Pre test

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Pre-test scores	C Group	37	1.8649	0.8701	.14582
	E Group	37	2.2162	0.82108	.13498

The control group had an average content score of 1.86 (SD = 0.89), while the experimental group had a slightly higher average of 2.22 (SD = 0.82).

Table 3.9

Independent T-Test of Content Scores in the Pre-Test for the CG and EG

<i>Content scores in Pre-Test</i>	Levene's Test for Equality of Variances		t-test for Equality of Means					t-test for Equality of Means 95% Confidence Interval of the Difference	
	f	sig	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	0.183	0.67	-1.768	72	0.081	-0.35135	0.19871	-0.74747	0.0447
Equal variances not assumed			-1.768	71.575	0.081	-0.35135	0.19871	-0.74751	0.0448

Although the experimental group performed better on average, an independent samples t-test showed that this difference was not statistically significant ($t(72) = -1.768$, $p = 0.081$). Since the p-value is greater than the common threshold of 0.05, this means there is no strong evidence that

the two groups were different in content performance at the beginning of the study. Also, Levene's Test for Equality of Variances showed no significant difference in variances ($F = 0.183$, $p = 0.67$), which means the t-test results are reliable. Therefore, it can be concluded that the two groups were statistically similar in terms of content in the pre-test.

3.1.3.2.2 Homogeneity in Organization

Table 0.10

Independent sample test group statistics of Organisation scores for the Pre test

	Groups	N	Mean	Std. Deviation	Std. Error Mean
<i>Organisation scours</i>	Pre-test C Group	37	2.0270	0.99	0.16204
	E Group	37	2.0000	0.75	0.12254

The second subcomponent examined was organization. The control group had a mean organization score of 2.03 with standard deviation of (SD = 0.99), and the experimental group had a mean of 2.00 (SD = 0.75).

Table 0.11

Independent T-Test of Organisation Scores in the Pre-Test for the Control and Experimental Groups

<i>Organisation scores in the Pre-Test</i>	Levene's Test for Equality of Variances		t-test for Equality of Means					t-test for Equality of Means 95% Confidence Interval of the Difference	
	f	sig	T	df	Sig. (2- tailed)	Mean Difference	Std.Error Difference	Lower	Upper
Equal variances assumed	5.3	0.023	0.133	72	0.895	0.02703	0.20315	-0.37795	0.43200
Equal variances not assumed			0.133	67.028	0.895	0.02703	0.20315	-0.37846	0.43252

The difference in means was very small. The independent samples t-test confirmed that this difference was not statistically significant ($t(72) = 0.133$, $p = 0.895$). Although Levene's Test showed a significant difference in variances between the two groups ($F = 5.395$, $p = 0.023$), the t-

test was adjusted accordingly by not assuming equal variances. Even with this adjustment, the results still showed no significant difference since the p value $p = 0.895$ is much greater than the standard threshold of 0.05. As a result, we can conclude that the two groups were homogeneous in terms of organization before the experiment began.

3.1.3.2.3 Homogeneity in Grammar

Table 0.12

Independent sample test group statistics of Grammar scores for the Pre test

	Groups	N	Mean	Std. Deviation	Std. Error Mean
<i>Grammar Pre-test scours</i>	C Group	37	1.4865	1.01712	0.16721
	E Group	37	1.3784	0.92350	0.15182

The third subcomponent examined was grammar, which refers to the correct use of sentence structure, verb tenses, and agreement in students' writing. In the pre-test, the control group obtained a mean score of 1.49 (SD = 1.02), while the experimental group scored 1.38 (SD = 0.92).

Table 0.13

Independent T-Test of Grammar Scores in the Pre-Test for the CG and EG Groups

<i>Grammar scores in the Pre-Test</i>	Levene's Test for Equality of Variances		t-test for Equality of Means				t-test for Equality of Means 95% Confidence Interval of the Difference		
	f	Sig	T	df	Sig. (2-tailed)	Mean Difference	Std.Error Difference	Lower	Upper
Equal variances assumed	0.831	0.364	0.479	72	0.634	0.10811	0.22585	-0.34213	0.55834
Equal variances not assumed			0.479	71.339	0.634	0.10811	0.22585	-0.34220	0.55841

This small difference between means was examined using an independent samples t-test. The result showed no statistically significant difference between the two groups ($t(72) = 0.479$,

$p = 0.634$). The p -value is far above the standard significance level of 0.05, indicating that the difference in grammar scores is not meaningful. Levene's Test for Equality of Variances also indicated no significant difference in variances ($F = 0.831$, $p = 0.365$) with p -value above the standard significance level of 0.05, meaning that equal variances could be assumed and the results are considered valid. Thus, both groups were statistically equivalent in grammar at the start of the study.

3.1.3.2.4 Homogeneity in Vocabulary

Table 0.14

Independent sample test group statistics of vocabulary scores for the Pre test

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Vocabulary Pre-test scores	C Group	37	1.7297	0.99019	0.16279
	E Group	37	1.6216	0.75834	0.12467

The fourth subcomponent was vocabulary. The control group had a mean vocabulary score of 1.73 (SD = 0.99), slightly higher than the experimental group, which scored 1.62 (SD = 0.76). However, this small difference was not statistically significant ($t(72) = 0.527$, $p = 0.600$), as the p -value is well above 0.05.

Table 0.15

Independent T-Test of vocabulary Scores in the Pre-Test for the CG and EG Groups

vocabulary scores in the Pre-Test	Levene's Test for Equality of Variances		t-test for Equality of Means					t-test for Equality of Means 95% Confidence Interval of the Difference	
	F	sig	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	2.226	0.140	0.527	72	0.600	0.10811	0.20504	-0.30063	0.51685
Equal variances not assumed			0.527	67.421	0.600	0.10811	0.20504	-0.30111	0.51733

Levene's Test for Equality of Variances showed no significant difference in the spread of scores between the two groups ($F = 2.226$, $p = 0.140$) with p value greater than $\alpha=0.05$, so equal variances were assumed. Overall, this confirms that both groups were homogeneous in terms of vocabulary use before the experiment.

3.1.3.2.5 Homogeneity in Mechanics:

Table 0.16

Independent sample test group statistics of Mechanics scores for the Pre test

	Groups	N	Mean	Std. Deviation	Std. Error Mean
<i>Mechanics</i> test scours	C Group	37	1.7027	.57081	0.09384
	E Group	37	1.4595	.64956	0.10679

The final analyzed subcomponent was mechanics, which involves the correct use of punctuation, capitalization, and spelling. The control group had a mean score of 1.70 (SD = 0.57), while the experimental group scored 1.46 (SD = 0.65). Although the control group performed slightly better, the independent samples t-test revealed that the difference was not statistically significant ($t(72) = 1.711$, $p = 0.091$). The p -value is higher than 0.05, indicating no strong evidence of a real difference.

Table 0.17

Independent T-Test of Mechanics Scores in the Pre-Test for the CGL and EG Groups

<i>Mechanics scores in the Pre-Test</i>	Levene's Test for Equality of Variances		t-test for Equality of Means					t-test for Equality of Means 95% Confidence Interval of the Difference	
	f	Sig	t	df	Sig. (2-tailed)	Mean Difference	Std.Error Difference	Lower	Upper
Equal variances assumed	1.581	0.213	1.711	72	0.091	0.24324	0.14216	-0.04015	0.52663
Equal variances not assumed			1.711	70.830	0.091	0.24324	0.14216	-0.04023	0.52671

Levene's Test for Equality of Variances ($F = 1.581$, $p = 0.213$) confirmed that the assumption of equal variances is valid. Therefore, it can be concluded that both groups were statistically similar in mechanics during the pre-test.

3.2 Analysis of Experimental Phase:

The current section is devoted to analyses the data collected from the pretest, progress test, and posttest. Given the nature of the scores, which are measured on an interval scale, parametric statistical procedures were applied using the Statistical Package for the Social Sciences (SPSS). In addition, descriptive statistics were used to summarize the data, providing frequencies, means, and standard deviations for each component of writing performance: content, organization, grammar, vocabulary, and mechanics.

3.2.1 Verifying the efficacy of the treatment comparing post test results of both group

To conclude whether the intervention was successful in improving the student's writing skill, an independent sample t-test between the post test scores of both the experimental and control group was conducted.

3.2.1.1 Independent Sample T-Test

Table 0.18

Descriptive statistics of the Post-test scores for group and experimental group

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Post-test scores	C Group	37	9.0811	3.67709	0.60451
	E Group	37	13.1081	3.22132	0.52958

The findings indicated that the experimental group ($M = 13.11$, $SD = 3.22$), which was exposed to automated writing evaluation tools, achieved significantly higher scores than the control group ($M = 9.08$, $SD = 3.68$).

Table 0.19

Independent T-Test of Post-Tests for the Control and the Experimental Groups

Post-test scores	Levene's Test for Equality of Variances		t-test for Equality of Means					t-test for Equality of Means 95% Confidence Interval of the Difference	
	F	sig	T	df	Sig. (2- tailed)	Mean Difference	Std.Error Difference	Lower	Upper
Equal variances assumed	1.716	0.194	-5.011	72	0.000	-4.02703	0.80367	-5.62912	-2.42494
Equal variances not assumed			-5.011	70.775	0.000	-4.02703	0.80367	-5.62912	-2.42446

Levene's test confirmed the assumption of equal variances ($p = 0.194 > 0.05$), validating the use of the equal variances t-test. The results showed a statistically significant difference in performance between the groups, $t(72) = -5.011$, $p < 0.001$, with a mean difference of -4.03. The 95% confidence interval for the difference ranged from -5.63 to -2.42. These outcomes suggest that exposure to automated writing evaluation positively influenced the writing performance of the experimental group. Consequently, the null hypothesis—stating that the use of automated writing

evaluation tools would not significantly improve students' writing performance—is rejected. The alternative hypothesis is accepted, confirming that the integration of automated writing evaluation tools contributed to measurable gains in the learners' writing outcomes.

3.2.2 Performance of the experimental group in the Quazi experimental phase:

In order to statistically verify whether this difference was significant, a paired-samples t-test was conducted to compare the pre-test and post-test scores of the experimental group.

Table 0.20

Descriptive statistics on the Performance of the Experimental Group on the Pre-test Post-test

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Pair 1	Pre-test experimental	37	8.4865	3.24569	0.53359
	Post-test experimental	37	13.1081	3.22132	0.52958

Table 3.21

Paired Samples T-Test of the Performance of the EG on the Pre-test and the Post-test

Paired Differences		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	T	Df	Sig. (2-tailed)
					Lower	Upper		
Pair 1	Pre-test Post-test	4.62162	1.91994	0.31564	-3.98148	5.26176	-14.642	0.000

To evaluate the effect of automated writing evaluation (AWE) technology on students' writing performance, a paired samples t-test was conducted on the experimental group's scores before and after the intervention. The results showed a clear improvement in writing skill, with the mean post-test score (M = 13.11, SD = 3.22) being significantly higher than the pre-test score (M =

8.49, SD = 3.25). The test produced a t-value of -14.642 with 36 degrees of freedom and a p-value less than 0.001 ($p = .000$), indicating a statistically significant difference. The mean difference between the pre- and post-test scores was 4.62, and the 95% confidence interval for this difference ranged from -5.26 to -3.98. These results confirm that the experimental group showed meaningful progress in writing after the integration of AWE tools into their learning. The significance of the difference supports the effectiveness of AWE technology in improving overall writing performance

3.2.2.1 Performance of the Experimental Group Across Pretest, Progress Test, and Posttest

Table 0.22

Descriptive Statistics of Experimental Group Scores in Pre, Progress, and Post tests

Test	Mean	Std. Deviation	N
Pretest	8.49	3.19	37
Progress	13.38	2.53	37
Posttest	13.08	3.23	37

The mean scores show a clear improvement from the pretest ($M = 8.49$) to the progress test ($M = 13.38$). This represents a substantial gain of nearly 5 points. The posttest score ($M = 13.08$) remained close to the progress test score, indicating that students maintained their achievement levels after the initial progress.

Table 0.23

Repeated Measures ANOVA: Tests of Within-Subjects Effects (Greenhouse–Geisser Corrected)

Source	Df	F	p	Partial η^2
Time	1.62, 58.18	80.99	.000	.692

The repeated-measures ANOVA shows that the effect of time on pretest, progress test, and posttest was highly significant p -value (.000) is smaller than the standard alpha level of .05. The effect size ($\eta^2 = .692$) indicates that about 69% of the variance in scores is explained by time, confirming that the differences between scores were not random but reflect real progress. Therefore, the observed improvement was systematic and not due to chance.

Table 0.24

Repeated Measures ANOVA: Tests of Within-Subjects Contrasts

Contrast	F	p	Partial η^2
Linear	221.55	.000	.860
Quadratic	32.50	.000	.474

The linear contrast was highly significant, $F(1, 36) = 221.55$, $p = .000$, $\eta^2 = .860$, indicating a strong upward progress from pretest to the later tests. The quadratic contrast was also significant, $F(1, 36) = 32.50$, $p = .000$, $\eta^2 = .474$, suggesting that while scores rose sharply from pretest to progress test, they plateaued between the progress test and posttest. Because the obtained p -values (.000) are smaller than the standard alpha level of .05, the results are statistically significant.

3.2.2.2 Paired Samples t -test Experimental Group Results in Content, Organization, Grammar, Vocabulary, and Mechanics.

In addition to the overall performance of the experimental group, a paired-samples t -test was conducted to examine the progress of the experimental group across the five subcomponents of writing: content, organization, grammar, vocabulary, and mechanics.

3.2.2.2.1 Content

Table 0.25

Descriptive statistics on the Performance of the EG in CG on the Pre-test and the Post-test

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Pair 1	Content Pre-test Experimental G	37	2.2162	0.82108	0.13498
	Content Post-test Experimental G	37	2.6486	0.85687	0.14087

A paired samples t-test was conducted to examine the impact of automated writing evaluation (AWE) on students' performance in writing content. The mean score for the experimental group increased from 2.22 (SD = 0.82) in the pre-test to 2.65 (SD = 0.86) in the post-test

Table 0.26

Paired Samples T-Test of the Performance of the EG in CG on the Pre-test and the Post-test

Paired Differences		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		T	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Content Pre-test Post-test	-0.43243	0.60280	0.09910	-0.63341	-0.23145	-4.364	36	0.000

. The mean difference of -0.43 was statistically significant, $t(36) = -4.364$, $p < .001$. This result indicates that There is a significant change which entails that the students have increased their performance in content which indicates that the use of AWE tools had a positive effect on students' ability to develop ideas and maintain relevance in their writing content.

3.2.2.2.2 Organization

Table 0.27

Descriptive statistics on the Performance of the EG in Organization on the Pre-test the Post-test

Groups	N	Mean	Std. Deviation	Std. Error Mean
Pair 1 <i>Organization</i> Pre-test Experimental G	37	2.0000	0.74536	0.12254
<i>Organization</i> Post-test Experimental G	37	2.7838	0.75038	0.12336

To assess students' progress in organizing their writing, a paired samples t-test was conducted on the experimental group's scores in the organization component. The mean increased from 2.00 (SD = 0.75) in the pre-test to 2.78 (SD = 0.75) in the post-test.

Table 3.28

Paired Samples T-Test of the Performance of the EG in Organization on the Pre, Post-test

Paired Differences		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the t Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	<i>Organization</i> Pre-test Post-test	-0.78378	0.47930	0.07880	-0.94359	-0.62398	-9.947	36	0.000

The mean difference was -0.78, which was statistically significant, $t(36) = -9.947$, $p < .001$. There is a significant change which entails that the students have increased their performance in Organization. These findings suggest that the AWE technology contributed to improving the students' logical structuring and coherence in written texts.

3.2.2.2.3 Grammar

Table 0.29

Descriptive statistics on the Performance of the Experimental Group in Grammar on the Pre-test Post-test

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Pair 1	Grammar Pre-test Experimental G	37	1.3784	0.92350	0.15182
	Grammar Post-test ExperimentalG	37	2.5135	0.83738	0.13766

The impact of AWE on grammatical accuracy was measured using a paired samples t-test. Results showed an improvement from a pre-test mean of 1.38 (SD = 0.92) to a post-test mean of 2.51 (SD = 0.84).

Table 0.30

Paired Samples T-Test of the Performance of the EG in Grammar on the Pre-test Post-test

Paired Differences									
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	Lower	Upper	t	Sig. (2-tailed)
Pair 1	Grammar Pre-test Post-test	-1.13514	0.71345	0.11729	-1.37301	-0.89726	-9.678	36	0.000

The mean difference of -1.14 was statistically significant, $t(36) = -9.678$, $p < .001$. There is a significant change which entails that the students have increased their performance in Grammar. This indicates that exposure to automated corrective feedback helped students notice and reduce grammatical errors in their writing.

3.2.2.2.4 Vocabulary

Table 3.31

Descriptive statistics on the Performance of the Experimental Group in Vocabulary on the Pre-test and the Post-test

Groups	N	Mean	Std. Deviation	Std. Error Mean
Pair 1 Vocabulary Pre-test Experimental G	37	1.6216	0.75834	0.12467
Vocabulary Post-test ExperimentalG	37	2.6757	0.81833	0.13453

Vocabulary development was also analyzed through a paired samples t-test. The experimental group's mean vocabulary score rose from 1.62 (SD = 0.76) in the pre-test to 2.68 (SD = 0.82) in the post-test.

Table 0.32

Paired Samples T-Test of the Performance of the Experimental Group in Vocabulary on the Pre-test and the Post-test

Paired Differences		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Vocabulary Pre-test Post-test	-1.05405	0.70498	0.11590	-1.28911	-0.81900	-9.095	36	0.000

The mean difference of -1.05 was statistically significant, $t(36) = -9.095$, $p < .001$. There is a significant change which entails that the students have increased their performance in Vocabulary. This finding shows that AWE tools may enhance students' lexical choices by providing frequent feedback on word use and appropriacy.

3.2.2.2.5 Mechanics

Table 0.33

Descriptive statistics on the Performance of the Experimental Group in Mechanics on the Pre-test and the Post-test

Groups	N	Mean	Std. Deviation	Std. Error Mean
Pair 1 <i>Mechanics</i> Pre-test Experimental G	37	1.2432	0.86299	0.14187
<i>Mechanics</i> Post-test ExperimentalG	37	2.4865	0.76817	0.12629

Table 0.34

Paired Samples T-Test of the Performance of the Experimental Group in Mechanics on the Pre-test and the Post-test

Paired Differences		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	t	df	Sig. (2-tailed)
					Lower	Upper		
Pair 1	<i>Mechanics</i> Pre-test Post-test	-1.24324	0.64141	.10545	-1.45710	-1.02939	-11.790	0.000

Finally, the mechanics component, covering punctuation, spelling, and capitalization, was evaluated using a paired samples t-test. The mean score increased from 1.24 (SD = 0.86) to 2.49 (SD = 0.77), with a statistically significant mean difference of -1.24, $t(36) = -11.790$, $p < .001$. There is a significant change which entails that the students have increased their performance in Mechanics. This substantial improvement suggests that AWE technology effectively supported students in improving the technical accuracy of their writing.

3.2.3 Performance of the Control Group in the Quazi Experimental Phase:

To examine the development of the control group's writing abilities during the quasi-experimental phase, a paired samples t-test was conducted to compare their performance on the pre-

test and post-test across the five subcomponents of writing: content, organization, grammar, vocabulary, and mechanics. The findings are discussed in detail below.

Table 0.35

Descriptive statistics on the Performance of the Control Group on the Pre-test and the Post-test

Groups	N	Mean	Std. Deviation	Std. Error Mean
Pair 1 Pre-test Control	37	8.8108	3.94995	0.64937
Post-test Control	37	9.0811	3.67709	0.60451

The control group's overall performance in the quasi-experimental phase showed a slight increase in writing scores from the pre-test (M = 8.81, SD = 3.95) to the post-test (M = 9.08, SD = 3.68).

Table 0.36

Paired Samples T-Test of the Performance of the Control Group on the Pre-test and the Post-test

Paired Differences		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	t	df	Sig. (2-tailed)	
					Lower	Upper			
Pair 1	Pre-test Post-test	-.27027	0.87078	0.14316	-0.56060	0.02006	-1.888	36	0.067

However, the paired samples t-test indicated that this improvement was not statistically significant, $t(36) = -1.888$, $p = 0.067$. Since the p-value exceeds the conventional threshold of 0.05, the change in scores cannot be confidently attributed to the instructional methods used during the study period. While there was a marginal improvement, it was not sufficient to demonstrate a meaningful effect on the control group's writing skills. This lack of significant progress suggests that the traditional teaching approach without automated writing evaluation technology did not

substantially enhance the participants' writing performance. The findings highlight the need for more effective interventions, such as integrating automated writing feedback tools, to support and improve students' writing development more decisively.

3.2.3.1 Paired Samples t-test Control Group Results in Content, Organization, Grammar, Vocabulary, and Mechanics.

3.2.3.1.1 Content

Table 3.37

Descriptive statistics on the Performance of the CG in Content on the Pre-test and the Post-test

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Pair 1	Content Pre-test Control G	37	1.8649	0.88701	0.14582
	Content Post-test Control G	37	2.0000	0.84984	0.13971

Table 0.38

Paired Samples T-Test of the Performance of the CG in Content on the Pre-test and the Post-test

Paired Differences		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	t	df	Sig. (2-tailed)	
					Lower	Upper			
Pair 1	Content Control Pre-test_Post-test	-0.13514	0.53552	0.08804	-0.31369	0.04342	-1.535	36	0.134

The descriptive statistics indicated a slight increase in the control group's mean score for content from 1.86 (SD = 0.89) in the pre-test to 2.00 (SD = 0.85) in the post-test. Although this numerical rise suggests a minor improvement in the students' ability to generate and elaborate on ideas, the paired samples t-test yielded a non-significant result ($t(36) = -1.535, p = 0.134$).

The absence of a statistical significance indicates that the observed improvement in content development was not strong or consistent enough to eliminate random chance. In practical terms, the students in the control group did not show a noticeable improvement in their capacity to articulate meaningful, relevant, and well-supported ideas in their writing performance.

3.2.3.1.2 Organisation

Table 0.39

Descriptive statistics on the Performance of the CG in Organisation on the Pre-test and the Post-test

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Pair 1	Organisation Pre-test Control G	37	2.0270	0.98563	0.16204
	Organisation Post-test Control G	37	2.2432	0.89460	0.14707

Table 3.40

Paired Samples T-Test of the Performance of the CG in Organisation on the Pre-test and the Post-test

Paired Differences									
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	t	df	Sig. (2-tailed)	
					Lower	Upper			
Pair 1	Organisation Pre-test_Post-test	-0.21622	0.58382	0.09598	-0.41087	0.02156	-2.253	36	0.030

In contrast to the other writing components, the organization showed a statistically significant improvement. The mean score increased from 2.03 (SD = 0.99) on the pre-test to 2.24 (SD = 0.89) on the post-test. The paired samples t-test confirmed that this difference was significant, $t(36) = -2.253$, $p = 0.030$ which is below the conventional threshold of 0.05 of P value.

The findings indicate that the participants in the control group demonstrated an increased ability to organize their ideas in a logical and coherent manner throughout the experimental phase. Despite the fact that there was no interaction with Automated feedback evaluation tool for the control group, classroom-based conventional learning can be said to have offered enough practice or opportunities for feedback, and hence, enhancing the students' skill to make their paragraphs more coherent and connect their ideas with greater clarity and organization.

3.2.3.1.3 Grammar

Table 0.41

Descriptive statistics on the Performance of the CG in Grammar on the Pre-test and the Post-test

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Pair 1	Grammar Pre-test Control G	37	1.4865	1.01712	0.16721
	Grammar Post-test Control G	37	1.4054	1.06613	0.17527

Table 3.42

Paired Samples T-Test of the Performance of the CG in Grammar on the Pre-test and the Post-test

Paired Differences		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	t	df	Sig. (2-tailed)	
					Lower	Upper			
Pair 1	GrammarControl Pre-test Post-test	0.08108	0.54662	0.08986	-0.10117	0.26333	0.902	36	0.373

With respect to grammatical accuracy, the control group displayed differences between their pre-test (M = 1.49, SD = 1.02) and post-test (M = 1.41, SD = 1.07) scores. However, the paired samples t-test indicated that this difference was not statistically significant, $t(36) = 0.902$, $p = 0.373$.

The results indicate that the control group did not demonstrate significant improvement in the use of appropriate grammatical structures. Possibly, the pedagogical practices used throughout the treatment interval did not adequately focus on or develop the grammatical features necessary for appreciable improvement. As grammar development typically needs focused attention, conscious practice, and timely corrective feedback, the inability to demonstrate significant improvement is within expected outcomes under a standard instructional system that lacks special intervention.

3.2.3.1.4 Vocabulary

Table 3.43

Descriptive statistics on the Performance of the Control Group in Vocabulary on the Pre-test and the Post-test

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Pair 1	Vocabulary Pre-test Control G	37	1.7297	0.99019	0.16279
	Vocabulary Post-test Control G	37	1.5946	0.86472	0.14216

Table 0.44

Paired Samples T-Test of the Performance of the Control Group in Vocabulary on the Pre-test and the Post-test

Paired Differences		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Vocabulary Control Pre-test Post-test	0.13514	0.58510	0.09619	-0.05995	0.33022	1.405	36	0.169

In terms of vocabulary use, differences were noted between the control group's pre-test (M = 1.73, SD = 0.99) and post-test (M = 1.59, SD = 0.86) scores. However, these differences were not statistically significant, as shown by the results of the paired samples t-test ($t(36) = 1.405$, $p =$

0.169). The t-value of 1.405 indicates the degree of difference between the two sets of scores relative to the variability in the data, while the p-value of 0.169 exceeds the commonly accepted threshold of 0.05 for statistical significance. This means that the observed change in vocabulary scores is likely due to random variation rather than a meaningful effect of the teaching approach.

This result implies that the control group made minimal improvement in their use of varied or precise vocabulary. It is reasonable that no significant improvement was found in the limited period of the study and in the lack of explicit vocabulary instruction since vocabulary development usually requires extensive exposure, repeated use, and contextual engagement.

3.2.3.1.5 Mechanics

Table 0.45

Descriptive statistics on the Performance of the Control Group in Mechanics on the Pre-test and the Post-test

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Pair 1	<i>Mechanics</i> Pre-test Experimental G	37	1.7027	0.57081	0.09384
	<i>Mechanics</i> Post-test ExperimentalG	37	1.7838	0.67227	0.11052

Table 3.46

Paired Samples T-Test of the Performance of the Control Group in Mechanics on the Pre-test and the Post-test

Paired Differences		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	t	df	Sig. (2-tailed)	
					Lower	Upper			
Pair 1	<i>Mechanics</i> Pre-test Post-test	-0.08108	0.43323	0.07122	-0.22553	0.06336	-1.138	36	0.262

With regard to writing mechanics—which include punctuation, capitalization, and spelling—the control group showed a slight increase in performance. The mean score rose from 1.70 (SD = 0.57) on the pre-test to 1.78 (SD = 0.67) on the post-test. Despite this numerical difference, the paired samples t-test indicated that the change was not statistically significant ($t(36) = -1.138$, $p = 0.262$). Since the p-value of 0.262 is well above the conventional 0.05 threshold, the observed change cannot be considered meaningful in statistical terms.

This result implies that although students in the control group might have shown a minor tendency towards better attention to surface-level elements of writing, the improvement was not significant or systematic. Like grammar and vocabulary, developing accuracy in mechanics usually calls for explicit instruction and corrective feedback—elements that might have been absent or inadequate in the educational process the control group underwent.

3.2.4 Verifying Improvement in Writing Skill Components

To determine whether the instructional intervention had a significant impact on the writing components of the experimental group compared to the control group, independent samples t-tests were conducted on the post-test scores of both groups across the five key subcomponents: content, organization, grammar, vocabulary, and mechanics.

3.2.4.1 Independent Samples *t*-test Control and Experimental Group Results in Content, Organization, Grammar, Vocabulary, and Mechanics:

3.2.4.1.1 Improvement in Content

Table 0.47

Descriptive statistics of the content scores in Post-test scours for control group and experimental group

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Content	C Group	37	2.0000	0.84984	0.13971
Post-test scours	E Group	37	2.6486	0.85687	0.14087

The mean content score for the control group on the post-test was 2.00 (SD = 0.85), whereas the experimental group achieved a higher mean score of 2.65 (SD = 0.86).

Table 0.48

Independent T-Test of Content Scores in the Post-Test for the CG and EG

<i>Content scores in Post-Test</i>	Levene's Test for Equality of Variances		t-test for Equality of Means					t-test for Equality of Means 95% Confidence Interval of the Difference	
	F	sig	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	0.808	0.372	-3.269	72	0.002	-0.64865	0.19840	-1.04416	-0.25314
Equal variances not assumed			-3.269	71.995	0.002	-0.64865	0.19840	-1.04416	-0.25314

The independent samples *t*-test revealed a statistically significant difference between the two groups ($t(72) = -3.269, p = 0.002$), with the experimental group clearly outperforming the control group. The negative *t*-value indicates that the mean score of the control group was lower than that of the experimental group, and the *p*-value (0.002) being well below the threshold of 0.05 confirms

that this difference is statistically significant. The 95% confidence interval for the mean difference [-1.044, -0.253] does not include zero, further reinforcing the reliability of the result.

This finding strongly suggests that the treatment received by the experimental group had a meaningful and positive effect on their ability to generate and develop content in their writing. The improvement in content indicates better idea generation, relevance, and support.

3.2.4.1.2 Improvement in Organization

Table 0.49

Descriptive statistics of the Organization scores in Post-test scours for CG and EG

		Groups	N	Mean	Std. Deviation	Std. Error Mean
<i>Organisation scours</i>	Post-test	C Group	37	2.2432	0.89460	0.14707
		E Group	37	2.7838	0.75038	0.12336

Table 0.50

Independent T-Test of Organisation Scores in the Post-Test for CG and EG

<i>Organisation scores in the Post-Test</i>	Levene's Test for Equality of Variances		t-test for Equality of Means					t-test for Equality of Means 95% Confidence Interval of the Difference	
	F	sig	t	df	Sig. (2-tailed)	Mean Difference	Std.Error Difference	Lower	Upper
Equal variances assumed	1.646	0.204	-2.816	72	0.006	-0.54054	0.19196	-0.92320	-0.15788
Equal variances not assumed			-2.816	69.884	0.006	-0.54054	0.19196	-0.92340	-0.15768

In terms of organization, the control group achieved a mean post-test score of 2.24 (SD = 0.89), while the experimental group scored a mean of 2.78 (SD = 0.75). The independent samples t-test showed a significant difference in favor of the experimental group ($t(72) = -2.816, p = 0.006$). Again, the negative t -value signifies that the experimental group performed better, and the p -value below 0.05 confirms the statistical significance of this outcome. The confidence interval [-0.923, -0.158] does not cross zero, indicating a reliable difference between the two groups.

There was a statistically significant difference between the control and experimental groups in terms of organization in the post-test results. While both groups demonstrated some level of improvement, the experimental group significantly outperformed the control group, suggesting a more substantial development in their ability to structure and logically sequence their ideas.

These results imply that although both groups may have improved, the instructional method used with the experimental group was particularly effective in helping students structure their ideas more clearly and logically. Elements such as paragraph unity, coherence, and transitions appear to have been better developed among students in the experimental group.

3.2.4.1.3 *Improvement in Grammar*

Table 0.51

Descriptive statistics of the Grammar scores in Post-test scours for CG and EG

	Groups	N	Mean	Std. Deviation	Std. Error Mean
<i>Grammar</i> Post-test scours	C Group	37	1.4054	1.06613	0.17527
	E Group	37	2.5135	0.83738	0.
					13766

Table 0.52*Independent T-Test of Grammar Scores in the Post-Test for CG and EG*

<i>Grammar scores in the Post-Test</i>	Levene's Test for Equality of Variances		t-test for Equality of Means					t-test for Equality of Means 95% Confidence Interval of the Difference	
	F	sig	t	df	Sig. (2-tailed)	Mean Difference	Std.Error Difference	Lower	Upper
Equal variances assumed	3.235	0.076	-4.972	72	0.000	-1.10811	0.22287	-1.55239	-0.66382
Equal variances not assumed			-4.972	68.173	0.000	-1.10811	0.22287	-1.55282	-0.66340

The control group attained a mean grammar score of 1.41 (SD = 1.07) on the post-test, whereas the experimental group achieved a higher mean of 2.51 (SD = 0.84). The independent-samples *t*-test results show a quite significant difference ($t(72) = -4.972, p = 0.001$). These results indicate that the experimental group performed significantly better than the control group in grammatical accuracy. The very small value of $p = 0.001$ assures that the grammatical accuracy of the experimental group has not improved by chance, but rather reflects the significant impact of the intervention. Another evidence for the significant difference is shown by the confidence interval for the mean difference [-1.552, -0.664]. This implies that the instructional method utilized in the experimental group was highly effective in enhancing grammar-related aspects, including subject-verb agreement, verb tense usage, and sentence structure.

3.2.4.1.4 Improvement in Vocabulary

Table 0.53

Descriptive statistics of the vocabulary scores in Post-test scours for CG and EG

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Vocabulary	C Group	37	1.5946	0.86472	0.14216
Post-test scours	E Group	37	2.6757	0.81833	0.13453

Table 0.54

Independent T-Test of vocabulary Scores in the Post-Test for the CG and EG

	Levene's Test for Equality of Variances					t-test for Equality of Means				
	F	sig	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper	
<i>vocabulary scores in the Post-Test</i>										
Equal variances assumed	0.023	0.879	-5.523	72	0.000	-1.08108	0.19573	-1.47125	-0.69091	
Equal variances not assumed			-5.523	71.782	0.000	-1.08108	0.19573	-1.47127	-0.69089	

With regard to vocabulary, the control group recorded a mean post-test score of 1.59 (SD = 0.86), while the experimental group achieved a considerably higher mean of 2.68 (SD = 0.82). The independent samples t-test revealed a highly significant difference between the two groups ($t(72) = -5.523$, $p < 0.001$), indicating that the experimental group significantly outperformed the control group in vocabulary use. The t-value shows a significant difference in means; the p-value that is well below 0.05 reinforces the statistical significance of this result. The mean difference [-1.471, -0.691]'s 95% confidence interval supports even more the conclusion that the improvement was not random. The notable improvement noted among the experimental group implies that the

intervention, which combined automated writing assessment (AWE) with teacher feedback, was effective in augmenting students' ability to use vocabulary that is not only more suitable but also varied and contextually precise. Vocabulary acquisition typically demands multiple exposures to new words in reading or listening, combined with regular chances to work actively with the words in written or speaking tasks. In the absence of this synergy, students are not likely to retain and use new vocabulary with success. The provision of multimodal feedback to the treatment group appears to have fostered this process.

3.2.4.1.5 Improvement in Mechanics:

Table 0.55

Descriptive statistics of the Mechanics scores in Post-test scores for CG and EG

	Groups	N	Mean	Std. Deviation	Std. Error Mean
<i>Mechanics</i> test scores	C Group	37	1.7838	0.67227	0.11052
	E Group	37	2.4865	0.76817	0.12629

Table 0.56

Independent T-Test of Mechanics Scores in the Post-Test for CG and EG

<i>Mechanics scores in the Post-Test</i>	Levene's Test for Equality of Variances		t-test for Equality of Means				t-test for Equality of Means		95% Confidence Interval of the Difference	
	F	sig	t	Df	Sig. (2-tailed)	Mean Difference	Std.Error Difference	Lower	Upper	
Equal variances assumed	1.628	0.206	-4.187	72	0.000	-0.70270	0.16782	-1.03724	-0.36816	
Equal variances not assumed			-4.187	70.757	0.000	-0.70270	0.16782	-1.03734	-0.36806	

In the mechanics area, including punctuation, spelling, and capitalization, the control group's post-test mean score was 1.78 (SD = 0.67), whereas the experimental group's mean score was 2.49 (SD = 0.77). In an independent samples t-test, there was a significant difference between the two groups ($t(72) = -4.187, p < 0.001$), reflecting that the experimental group had significantly greater improvement.

The 95% confidence interval of the mean difference of [-1.037, -0.368] supports this outcome since it does not include zero and hence indicates that the difference between the experimental and control groups is statistically significant. In other words, we can be 95% sure that the experimental group indeed outperformed the control group, and the observed improvement is unlikely to be the result of random variation by itself. A confidence interval excluding zero strengthens the reliability of the result and supports the conclusion that the instructional approach that is applied with the experimental group had a significant positive influence. The findings show that the members of the experimental groups used surface-level writing rules with more precision and accuracy. The consistent corrective feedback provided by the AWE tool, combined with instructor support, likely contributed to the observed improvement, particularly by enhancing students' mechanical accuracy during the writing process.

3.2.5 Evidence of Improvement from Students Corpus Paragraphs

3.2.5.1 Development in Grammar

Participant1

Verb tense/form:

Pre test:

- “The whole world was afraid of this deadly pandemic and about what will hapened in the future.”
→ Incorrect verb form. Should be “what would happen in the future.”
- “*In another side there was some of the intelligent students they devellop.*”
→ Wrong tense and misspelling. Should be “they developed.”

Post-test:

- “*...they will not find the mental peace as in their mother countries.*”
→ Correct use of future auxiliary + base verb.
- “*This category of people face many difficulties especially loneliness because they are far from their families.*”
→ Correct use of present simple for general truth. Shows mastery of tense.

Articles/Determiners:

Pre-test:

- “*one of the dangerous and complex pandemics*”
→ *missing superlative. Correct: “one of the most dangerous pandemics.”*
- “*...luck of getting good mark because some of the students took the position carelessly.*”
→ *Error: Singular/plural. Mark should be plural → “good marks.”*

Post-test:

- “*Homesickness is being a dreadful issue...*”
→ *Improvement: Correct use of the indefinite article a with dreadful issue.*

- *“They always feel themselves strangers.”*

→ Improvement: Article omission avoided; plural form *strangers* is acceptable in context.

Minor slips remain (e.g., *the mental peace*).

Sentence structure / cohesion

Pre-test:

- *“...so there was the problem of student’s luck of comprehension of the lessons and luck of getting good mark because some of the students took the position carelessly and they didn’t focus on their studies.”* →

Error: Run-on sentence, redundancy (*luck of comprehension, luck of mark = lack*). Poor cohesion.

- *“In another side there was some of the inteligent students they devellop.”*

→ Error: Sentence fragment with redundancy.

Post-test:

- *“To begin with, this category of people face many difficulties especially loneliness because they are far from their famillies.”*

→ Improvement: Clear topic sentence supported by cohesive device (*To begin with*).

- *“Moreover, it is possible to find friends there, but not deep friendships becuase they cannot trust them...”*

→ Improvement: Logical sequencing with *Moreover* and subordination (*because*).

- *“To conclude, homesickness is a very bad feeling which should be taken into consideration by returning to the mother country from time to time.”*

→ Improvement: Clear conclusion framing the paragraph.

Participant 2

Verb tense/form

Pre-test:

- *“or maybe because of the isolating and the uncertainty of what going to happen next and that of course had impacted their academic result badly and there for impacted the education.”*

→ Wrong verb form. The auxiliary verb is missing. Correct form: *“...the uncertainty of what was going to happen next...”*

Post-test:

- *“...you’ll get an immediate response by having a face-to-face conversation and that will save even more time since the person is just in front of you..”*

→ Correct auxiliary and base verb use.

- *“Lastly, you’ll know when to start the conversation and when to end*

→Improvement: Accurate auxiliary will used consistently.

Noun number / countability

Pre-test:

- *“During COVID-19, studying online was the solution for education, but that was a struggle for developping countries because of the low technology and internet ussages in*

education.”

→ Error: *Usages* is incorrect; *usage* is uncountable. *Low technology* is also awkward — better: *limited technology*.

- “...*that of course had impacted their academic result badly and there for impacted the education.”*

→ Error: *Result* should be plural (*results*).

Post-test:

- “*Furthermore, you can read the body language and facial expressions of the person you’re talking to.*”

→ Improvement: Correct plural form (*expressions*).

- “*We can conclude that having a conversation in person is far more satisfying than just having it online.*”

→ Improvement: Uncountable *communication* and *satisfaction* handled correctly.

Participant 3

Verb tense/form

- Pre-test: “...*and pupils get used to.*”

→ Wrong tense. Should be “*pupils had to get used to it.*”

- Post-test: “...*classroom provides a physical space where students gather to learn under the guidance of the teacher.*”

→ Correct present simple.

Noun number/countability

- Pre-test: “...It has affected on humans life all around the world in many field many in many field...”
→ Wrong plural. Correct: “in many fields.”
- Post-test: “...In contrast, online learning can be done from any place and there’s no communication between students and teachers.”
→ Proper countable/uncountable usage.

Prepositions

- Pre-test: “...It has affected on humans life all around the world in many field...”
→ Wrong preposition. Should be “affected human life.”
- Post-test: “...It can provide the flexibility to access information anytime and anywhere...”
→ Correct use of preposition phrase.

3.2.5.2 Development in Vocabulary

Participant 2

Pre-test:

- “...low technology and internet ussages in education.”
→ Error Low technology is awkward. More precise: limited technological resources.
- “...dishonesty of students’ results...”
→ Error Wrong collocation.
- “...the isolating and the uncertainty of what going to happen next...”
→ Error Wrong lexical form. The isolating → should be isolation.

- “.....this pandemic has certainly its bad effects on educationt...”
→ Error Weak and vague. Bad effects → more academic: negative effects consequences

Post-test:

- “ ... an immediate response by having a face-to-face conversation.”
→ Improvement: Strong collocation (immediate response)..
- “ ...you can read the body language and facial expressions.”
→ Improvement: Accurate lexical pairing (body language, facial expressions).
- “... a better understanding of the other’s point of view.”
→ Improvement: Clear, academic vocabulary..
- “ ...far more satisfying than just having it online”
→ Improvement: Stronger lexical choice (satisfying).

Participant 3

Pre-test:

- “...Corona virus or covid-19, is an eppidemic that came in 2020..”
→ Error Came is weak/colloquial. More academic: emerged or appeared.
- “Here in Algeria we stopped studying on March 2020, We did quarantine for 7 months so that we wouldn't study as usual, and pupils get used to”
→ Error Awkward and informal. “did quarantine” sounds conversational, not academic.
Better: “we underwent quarantine,” or “we were placed under quarantine.
→ Error pupils get used to is Incomplete, informal, and not academic. Needs stronger phrasing. Better: “...students had to adapt to the new condition

Post-test:

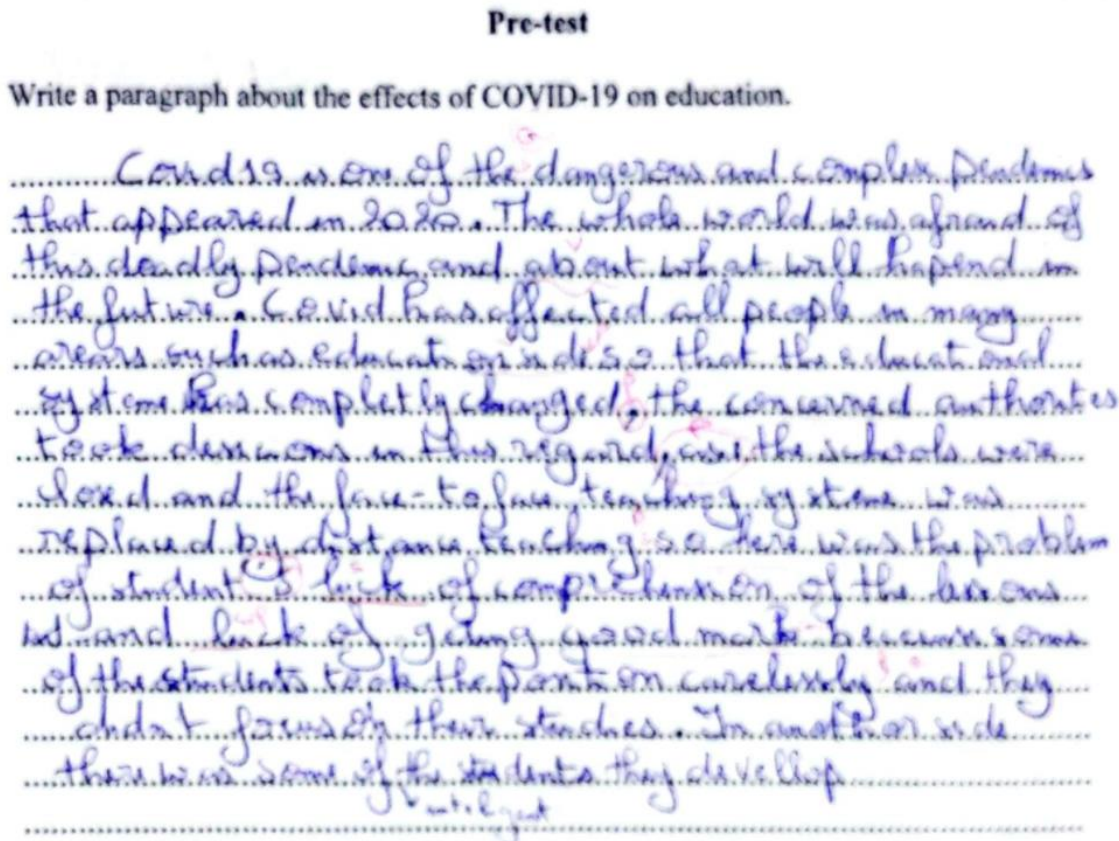
- “... the main difference between classroom-based learning... attributed to the environment structure and interaction involved.”
→ Improvement: Accurate academic phrasing (attributed to, interaction).
- “...teachers can provide individualized attention to students, identify their strengths, weaknesses.”
→ Improvement: Strong, precise academic vocabulary (individualized attention, strengths, weaknesses).
- “... flexibility to access information anytime and anywhere.”
→ Correct collocation (flexibility to access).

3.2.5.3 Development in Organization

Participant 1

Figure 3.01

Sample student paragraph from pre-test illustrating organizational issues.



In the pre-test, the student's paragraph lacked clear organizational structure. Ideas were presented as an unsequenced list in a form of run-on sentences without proper separation, with little attention to rhetorical patterns or logical progression. For example:

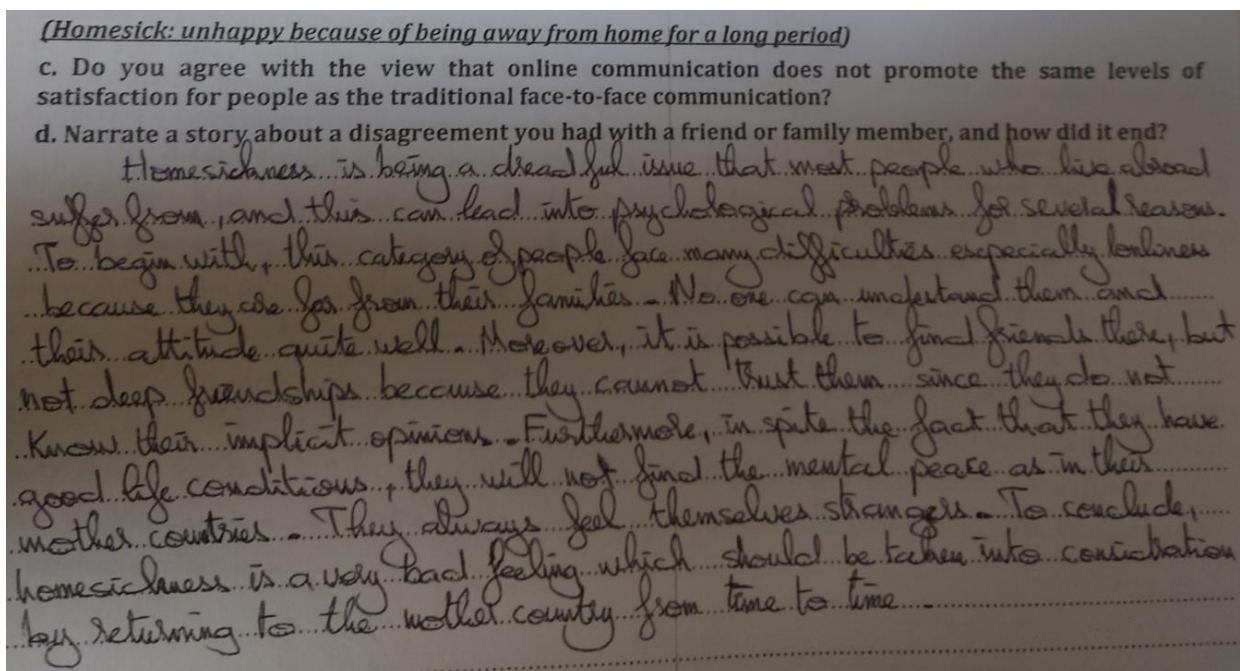
“Covid has affected all people in many areas such as education side so that the educational system has completely changed, the concerned authorities took decisions in this regard, as; the schools were closed and the face-to-face teaching system was replaced by distance teaching so there was the

problem of student's lack of comprehension of the lessons and lack of getting good mark because some of the students took the position carelessly and they didn't focus on their studies"

This passage illustrates certain organizational weaknesses. First, the paragraph is missing a clear topic sentence that signals the main idea from the outset. Additionally, the text reads as a fragmented list of disconnected thoughts that contain multiple ideas, such as the impact on education, closure of schools, online learning, student comprehension, student attitudes). The paragraph jumps abruptly from *"schools were closed"* to *"students' lack of comprehension"* and then suddenly to *"intelligent students they develop."* Second, the student demonstrates little control of cohesive devices, which are either misused or omitted. This absence results in abrupt shifts between sentences which weakens the overall rhetorical flow. For instance, *"In another side there was some of the intelligent students they develop."* *"In another side"* is incorrect and ineffective, disrupting coherence rather than guiding the reader smoothly from one point to the next. The proper transition would be *"On the other hand."* The sentence is also incomplete in meaning, leaving the idea underdeveloped. Finally, the pretest paragraph lacks a concluding remark to unify the discussion, there is no clear introduction, body, or conclusion, which makes the organization

Figure 0.2

Sample student paragraph from post-test illustrating organizational issues.



In contrast, the post-test demonstrates notable organizational improvement. The student introduces the paragraph with a clear and focused topic sentence:

“Homesickness is being a dreadful issue that most people who live abroad suffer from, and this can lead into psychological problem for several reasons.”

This sentence explicitly establishes the theme (homesickness) and outlines its consequences (psychological problems), thereby framing the discussion. The student then proceeds to develop the paragraph with sequenced supporting ideas signaled by cohesive devices: “To begin with... Moreover... Furthermore...”. These transitions guide the reader and mark logical development. They indicate greater awareness of paragraph structure, as each idea builds logically upon the previous one. Finally, the text uses a concluding statement: *“To conclude, homesickness is a very bad*

feeling which should be taken into consideration by returning to the mother country from time to time.”. This is evidence of rhetorical closure, which was entirely absent in the pretest.

3.2.5.4 Development in Mechanics

In the pre-test, the student’s writing revealed frequent mechanical errors in spelling, punctuation, and capitalization, which considerably weakened the clarity and the formal presentation. Spelling mistakes were numerous and often resulted from reliance on phonetic forms rather than standard orthography. For example, the student wrote “hapened” instead of “happened”, “systeme” instead of “system”, and “devellop” instead of “develop.” These errors demonstrate a lack of familiarity with conventional spelling patterns and indicate limited exposure to accurate written models. However, while spelling mistakes still exist in the post-test, they are fewer in number and do not hinder comprehension as much as in the pre-test.

Furthermore, capitalization was inconsistently applied. For example, “Covid” sometimes appears capitalized and sometimes appears in lowercase. It lacks a systematic capitalization at the beginning of sentences, which in turn reflects weak control of mechanics. In contrast, the post-test sentences consistently begin with capital letters, while proper nouns are appropriately capitalized, for instance, “To begin with,” “Moreover,” “Furthermore,” “To conclude.”

Punctuation in the pre-test was also problematic. Sentences were often written as long run-ons, lacking the full stops or commas needed to separate clauses, for instance: “*Covid has affected all people in many areas such as education side so that the educational system has completely changed...*”. This sentence is written without any internal punctuation to mark clause boundaries, producing a stream of ideas that are difficult to follow.

Punctuation use in the post-test is considerably better. The student now separates ideas with full stops and introduces clauses with commas where appropriate, for example: “Moreover, it is possible to find friends there, but not deep friendships because they cannot trust them since they do not know their implicit opinions.” Here, commas are correctly placed after transitional words (Moreover), and clauses are clearly distinguished. This reflects greater awareness of sentence boundaries compared to the run-on structures of the pre-test.

3.2.6 Development in content

Participant 2

Figure 0.3

Sample student paragraph from pre-test illustrating content issues

Pre-test

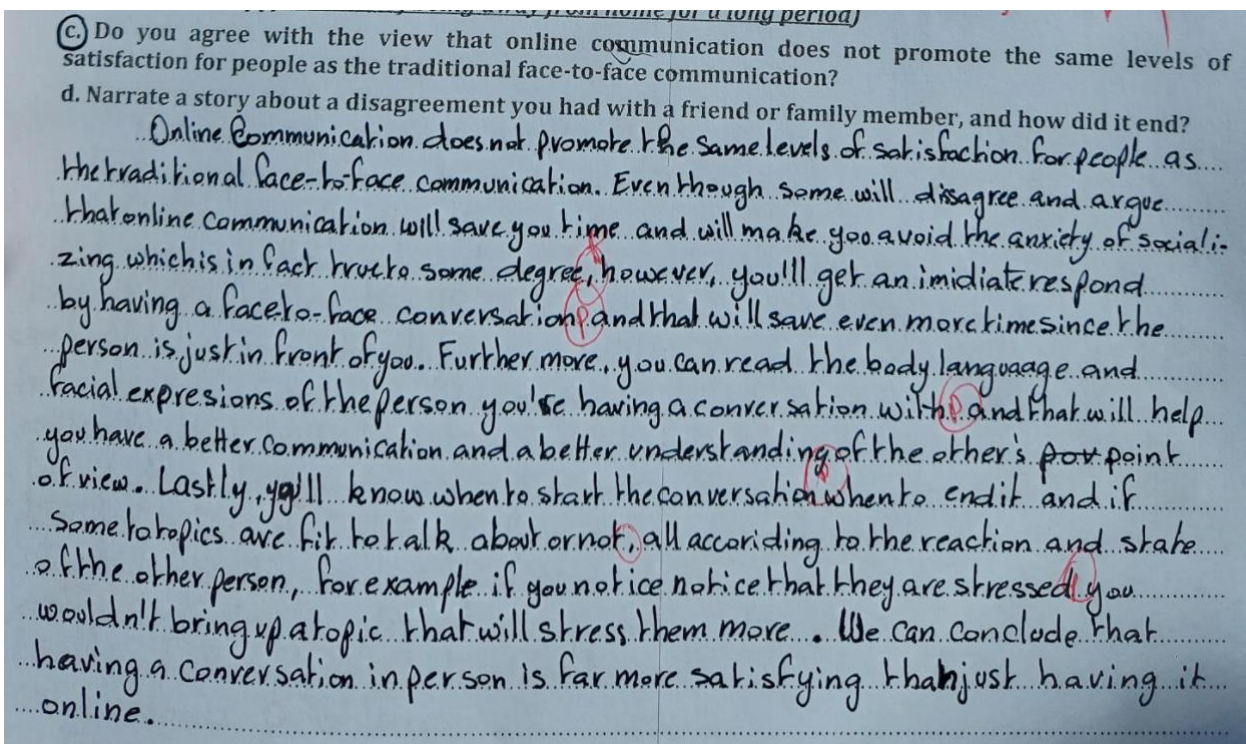
Write a paragraph about the effects of COVID-19 on education.

..... COVID-19 is a pandemic that happed almost 4
 .. years ago^o causing many negative effects. During COVID-19
 .. online studying online was the solution for education, but
 .. that was a struggle for developing countries because of
 the low^o technology and internet ussages in education. And
 .. for developed countries even though they're used to such a thing^o
 .. as online education they took their fair share of struggles^o that's
 .. because of the dishonesty of students's result and the
 .. possibility for them to cheat on the online tests. In addition^o
 .. to all of that students were more likely to suffer from mental
 .. health issues^o such as depression because of the death of their
 .. loved ones^o or maybe because of the isolating^o and the uncertainty
 .. of what going to happen next^o and that of course had impacted
 .. their academic result badly and therefor impacted the
 .. education. So this pandemic has certainly it's bad
 .. effects on education^o.....

In the pre-test, the student was assigned the topic of COVID-19's impact on education. His answer is relevant to the prompt, but the ideas remain broad and general. For instance, the student mentions "less technology and internet usages in education" in developing countries, "the dishonesty of students' results" in online exams, and "mental health issues such as depression." While these points are valid, they are only briefly discussed and not explained in detail. Moreover, the ideas are not clearly related to each other, which makes the paragraph read like a list of separate problems rather than a well-connected discussion. The only central statement "this pandemic has certainly its bad effects on education" is too general, and the supporting details do not build back to this claim in a coherent way. In addition, no specific examples or evidence are provided to strengthen the ideas; for example, the student could have described how poor internet access in rural areas limited online learning or how online testing created opportunities for cheating. Overall, the content is relevant to the assigned topic, but the ideas are underdeveloped and disconnected, which reduces the clarity and persuasiveness of the paragraph.

Figure 0.4

Sample student paragraph from post-test illustrating content issues



In the post-test, the student chose the topic of online versus face-to-face communication. The response is clearly relevant and demonstrates better idea development compared to the pre-test. The student presents a central claim that “having a conversation in person is far more satisfying than just having it online” and supports it with several connected reasons. For example, the student explains that in face-to-face interaction “you’ll get an immediate response,” that it is possible to “read the body language and facial expressions,” and that this helps achieve “a better understanding of the other’s point of view.” These points are more elaborated than in the pre-test and are linked together logically, which creates a sense of progression in the argument. Unlike the pre-test, the student also provides a concrete example: “if you notice that they are stressed you wouldn’t bring up a topic that will stress them more.” This addition illustrates the idea and makes the content more convincing. The student even acknowledges a counterpoint that online communication can save time and reduce

social anxiety before returning to defend the main argument. In general, the content in the post-test is more developed, better connected, and supported with examples. This difference shows a clear improvement from the pre-test.

3.3 Analysis of post-experimental phase

This section presents an analysis of the questionnaire and interview administered to the experimental group during the post-experimental phase in order to view participants' overall perceptions towards the use of Automated Writing Evaluation tools in enhancing their writing skill.

3.3.1 Questionnaire analysis:

The questionnaire aimed to assess students' perceptions of the Automated Writing Evaluation (AWE) tool used in the treatment phase. Responses were recorded using a 5-point Likert scale. According to Pimentel (2010), the interval scale is a representation of the Likert scale. If the mean ranges from 1.00 to 1.80, it indicates that participants strongly disagreed with the statement. A mean between 1.81 and 2.60 corresponds to disagree, while a mean between 2.61 and 3.40 reflects a neutral response, while it means Agree when it is from 3.41 to 4.20. Finally, a mean between 4.21 and 5.00 represents strong agreement.

3.3.1.1 Perceived trust

Table 3.57

Deceptive statistics of Perceived trust

Statements	N	Min	Max	Mean	S. D
1 I think I can rely on AWE to identify my writing mistakes.	37	2.00	5.00	4.1081	0.65760
2 I think that the AWE feedback on my writing is fair.	37	2.00	5.00	3.8378	0.83378
3 I trust that AWE keeps my personal information safe.	37	2.00	5.00	3.6486	0.91943
4 Overall, I think that AWE feedback is trustworthy	37	2.00	5.00	3.9730	0.79884
Perceived trust	37	2.25	5.00	3.8919	0.61953
Valid N	37				

This subsection of perceived trust yielded a mean score of 3.89 with a standard deviation of 0.62, which indicate that the participants generally agree that Virtual writing tutor as an AWE is reliable and trustworthy. The highest rating statement in this construct was " I think I can rely on AWE to identify my writing mistakes" with a mean of 4.11 and a standard deviation of 0.66, indicating that the students had a strong belief in the tool's error diagnostic capacity. The second highest rating item is "Overall, I think that AWE feedback is trustworthy" (M= 3.97), which means that students agree that the feedback provided with this tool is consistent and dependable. Similarly, the item of " I think that the AWE feedback on my writing is fair" yielded a mean of 3.84 which indicated a general agreement upon the objectivity and the accurate diagnosing of each student. This means that these tools aren't biased and can yield fair results to all students.

The lowest- rated item from this category is "I trust that AWE keeps my personal information safe" with a mean score of 3.6486 and a standard deviation of 0.91943. Although it is within the interval of "Agree", it represents a moderate level of confidence in the system's data protection. Given that the AWE tools function primarily as a writing support tool which does not preserve external output, this response may reflect either a limited understanding of the platform's strategy with handling data or a general caution among users regarding digital tools.

3.3.1.2 Perceived ease of use:

Table 0.58

Descriptive statistics o Perceived ease of use

Statements	N	Min	Max	Mean	Std. Deviation
5 The AWE feedback was clear and understandable.	37	3.00	5.00	4.3784	0.59401
6 The AWE feedback was relevant to my writing problems	37	1.00	5.00	3.8649	1.00449
7 AWE offers flexibility in writing as to time and place.	37	2.00	5.00	3.8378	0.86646
8 The AWE feedback enhanced my writing by immediately providing me the corrections and suggestions.	37	2.00	5.00	4.0811	0.89376
9 I find AWE easy to use.	37	3.00	5.00	4.4865	0.65071
Perceived ease of use	37	3.00	5.00	4.1959	0.54050
Valid N	37				

In this section of the questionnaire, participants have agreed upon the ease of using this AWE tool that was implemented in the intervention phase. The mean of the overall ease of use reached 4.20 with a standard deviation of 0.54, placing it at the peak of the threshold for the "Agree" interval. The highest mean was 4.48 for the item of "I find AWE easy to use" which indicates that the participants strongly agree with the fact that this tool is convenient and user-friendly. Likewise, students strongly agree that "The AWE feedback was clear and understandable" with a mean of 4.38 suggesting that they could interpret the automated feedback without difficulty or misunderstandings. Clarity is crucial for users to act on the provided suggestions without confusion or misinterpretation, especially for those who are still developing their language skills.

The item of "The AWE feedback enhanced my writing by immediately providing me with the corrections and suggestions" received a mean of 4.08 with a standard deviation of 0.89. This result underscores the value that students place on the immediacy of feedback, one of the greatest advantages of automated systems. Unlike more conventional teacher feedback, which may

take weeks or even days, AWE gives instant feedback, enabling students to revise and reflect more efficiently as they write.

The following statement "The AWE feedback was relevant to my writing problems" received a mean score of 3.86 with a standard deviation of 1.00 which indicates that students "Agree" and have perceived the feedback to be appropriately relevant to their individual writing issues. The score reflects a strong level of satisfaction with how well the AWE tool identified and responded to students' actual needs during the writing process. However, the slightly higher standard deviation ($SD= 1.00$) suggests that while the majority agreed with the statement, there existed certain variation in individual perceptions. This is not an indication of a flaw in the tool, but rather a natural reflection of the varied learner experiences. For instance, some students may have expected more in depth and personalized feedback particularly those working on writing aspects of organization and content including argument development where automated systems tend to have limited sensitivity.

Finally, the item "AWE provides flexibility in writing in terms of time and location" received a mean score of $M = 3.84$ ($SD = 0.87$), reflecting an agreement on the part of the students regarding the utility of the tool. The asynchronous feature of AWE, which enables students to interact with feedback at their own pace was appreciated by students. In addition, students valued the ability to access feedback in settings that align with their academic and personal schedules as demonstrated by this result. Flexibility is one of the tool's valued features, as the score attests. Although moderately lower than other items in this construct, the mean is comfortably placed in the upper half of the "Agree" range. This suggests that although most students found AWE accessible and adaptable, a few may have experienced situational constraints, such as limited internet connectivity, lack of personal devices, or institutional factors. This could have affected the degree

of flexibility that students could experience. These contextual factors, rather than limitations of the tool itself, may explain some of the variation in responses.

3.3.1.3 *Autonomy*

Table 3.59

Descriptive statistics of Autonomy

	Statements	N	Min	Max	Mean	Std. Deviation
10	AWE feedback helps me feel more independent in my writing process.	37	2.00	5.00	4.0000	0.94281
11	AWE allows me to self-correct my mistakes without relying on others.	37	2.00	5.00	4.0811	0.86212
12	I feel more confident writing on my own after using AWE feedback.	37	2.00	5.00	3.6486	1.03323
	Autonomy	37	2.00	5.00	3.9099	0.84856
	Valid N	37				

Students generally felt that AWE tool helped them be autonomous in the writing process, according to the autonomy construct results ($M = 3.91$, $SD = 0.85$). With each item falling within the "Agree" range of the Likert scale, this favorable view was recorded across all three items.

The statement "AWE allows me to fix my own errors without relying on others" got the highest mean score ($M = 4.08$, $SD = 0.86$), which shows that students greatly valued the tool's ability to help them locate and fix their own errors without relying on others. This indicates that AWE did not only function as a feedback tool but also as a collaborative learning agent that supported autonomy. Similarly, "AWE feedback makes me feel more independent in my writing process" scored $M = 4.00$ ($SD = 0.94$). This corroborates the fact that students felt empowered by the tool in the sense that they were able to take greater control over their learning process without immediate dependence on teachers and peers.

The third item, "I feel more confident writing on my own after using AWE feedback," recorded a slightly lower mean score of $M = 3.65$ ($SD = 1.03$). While this indicates an overall

agreement among the respondents, the fact that the mean decreased and the standard deviation was relatively higher indicates that not all the students experienced a full boost in writing confidence after utilizing the tool. This could be due to individual differences in writing ability or in the degree of reliance on teacher feedback before intervention. Also, it could be an indicator that while AWE enables mechanical revision, it may not necessarily address more higher-level problems such as argumentation or critical thinking, which are areas where students may still yearn for human assistance and approval.

Generally, the autonomy-based responses demonstrate that AWE impacted students' autonomy in writing significantly. Most of the students found the tool to be helpful in fostering greater self-revision and ownership of writing. However, as with any computer software, AWE is perhaps most effective as a supplement to—instead of a replacement for—teacher feedback in building greater writing confidence

3.3.1.4 *Perceived usefulness*

Table 0.60

Descriptive statistics of Perceived usefulness

Statements	N	Min	Max	Mean	Std. Deviation
13 AWE feedback teaches me how to use correct grammar structures in my writing.	37	3.00	5.00	4.5946	0.64375
14 AWE feedback improves my spelling and punctuation accuracy.	37	2.00	5.00	4.4054	0.79790
15 AWE suggestions make my sentences clearer by offering better word options	37	2.00	5.00	4.0270	0.89711
16 AWE feedback helps me organize ideas in a logical way.	37	2.00	5.00	3.7027	1.07664
17 AWE feedback helps me improve the content quality of my writing.	37	1.00	5.00	3.4595	1.09531
Perceived usefulness	37	2.20	5.00	4.0378	0.79140
Valid N	37				

The section of the Perceived Usefulness yielded a high average mean score of 4.04 with standard deviation of 0.79 which suggests that most students "Agree" and find the tool to be beneficial and useful in enhancing their writing ability. The highest mean score was for the item of "AWE feedback teaches me how to use correct grammar structures in my writing" with a mean value of 4.59 and standard deviation of 0.64. This reflects a strong agreement of the participants about the ability of AWE tools to strengthen the grammatical accuracy which indeed is one of the primary features of such technology.

Similarly, the item "AWE feedback improves my spelling and punctuation accuracy" received a high mean of 4.41 with a standard deviation of 0.80, indicating a strong agreement and satisfaction with the tools' capacity to address and enhance mechanical issues. These two items suggest that students valued AWE mostly for its ability to offer immediate, rule-based corrections in low-level writing areas.

The statement of "AWE suggestions make my sentences clearer by providing lexical alternatives" received a high mean rating of $M = 4.03$ ($SD = 0.89$), which indicates that students valued the lexical suggestions made by the tool. The finding indicates that AWE was not only perceived as a grammar checker tool but also as a useful tool for promoting sentence clarity through the promotion of more accurate or varied vocabulary use. With regard to the development of advanced writing skills, the item, "AWE feedback enables me to analyze my ideas logically," yielded a low mean rating of $M = 3.70$ ($SD = 1.08$). The result shows that although many students perceived the tool as being somewhat useful for structuring ideas, its utility for this function was not highly acknowledged. The final statement, "AWE feedback helps me improve the quality of my writing " had the lowest rating in this section with a mean value of 3.46 and standard deviation of 1.10.

Though both ratings fall within the "Agree" category, their comparatively lower means and higher standard deviations indicate that the tool's efficacy in addressing higher-order writing issues such as idea development, coherence, and argumentation were perceived differently by students. This distinction may imply the intrinsic limitations of automated systems to give sophisticated feedback on the more rhetorical or figurative elements of writing. Indeed, the results reaffirm that although students considered AWE to be especially useful for grammar, mechanics, and vocabulary choice its potential to improve organization and content quality was perceived as comparatively limited. Hence, though the tool sufficiently assists with fundamental writing competencies, its complete instructional potential is most likely to be fully achieved when combined with instructor feedback to target intricate aspects of writing.

3.3.1.5 Motivation

Table 0.61

Descriptive Statistics of Motivation

Statements	N	Min	Max	Mean	Std. Deviation
18 Using AWE feedback enables me to be more engaged in writing.	37	1.00	5.00	3.8919	1.04838
19 Using AWE feedback increases my productivity through encouraging me to write more frequently.	37	1.00	5.00	3.5946	1.01268
20 I feel motivated to improve my writing because of the feedback I receive from AWE.	37	2.00	5.00	3.7297	1.04479
Motivation	37	1.67	5.00	3.7387	0.92341
Valid N	37				

The Motivation construct sought to assess to what level AWE motivated students to write more actively and with higher frequencies. The high mean of the construct which is estimated by $M = 3.74$ ($SD = 0.92$) indicated that students in general agreed with the fact that AWE benefited

their attitudes and behavior towards writing. The highest-rated item, "Using AWE feedback enables me to be more engaged in writing," received a mean of 3.89 (SD = 1.05), showing that many participants felt more immersed and involved in their writing tasks as a result of interacting with the tool. This aligns with the perspective that the real-time, individualized delivery of feedback could have promoted more investment in the process of writing. The item of " I feel motivated to improve my writing because of the feedback I receive from AWE" scored slightly lower at a mean of 3.73 (SD = 1.04), yet it is still comfortably integrated in the "Agree" category. This indicates that the feedback was not only perceived useful but also motivational. AWE provides learners with a clear sense of direction for improvement and thus boosting their motivation to keep trying with their writing. The lowest rated item in this set was "Using AWE feedback makes me more productive by making me write more often," which received a mean of 3.59 (SD = 1.01). Although this rating still represents general agreement, it also reflects that the motivational impact of AWE may not have extend as forcefully to increased writing frequency for all students. Possible reasons would be time constraints, curricular demands, or lack of adequate access to the tool. However, the aggregate results suggest a moderately strong motivational impact of AWE. They highlight the perceived ability of AWE to support learners' motivation, especially when it is integrated in ways that foster autonomy and align closely with their writing needs.

3.3.1.6 Behavioral intention to use

Table 0.62

Descriptive statistics of Behavioral intention to use

Statements	N	Min	Max	Mean	Std. Deviation
21 I intend to use AWE feedback in the future.	37	2.00	5.00	4.1081	0.99398
22 I want to recommend AWE feedback to others	37	2.00	5.00	4.0541	1.07873
23 I will use AWE feedback frequently in the future.	37	1.00	5.00	3.6486	1.05978
Behavioral intention to use	37	1.67	5.00	3.9369	0.94555
Valid N	37				

The section of behavioral Intention to Use examines students' intention and inclination to reuse the Automated Writing Evaluation (AWE) system in the future and to recommend to others. The average mean value of this construct was $M = 3.94$ ($SD = 0.95$), this reflects a generally positive attitude among participants towards repeated use of AWE. The highest rated item was "I plan on using AWE feedback in the future" with a mean of 4.11 ($SD = 0.99$). This shows that the students overall felt that the tool was adequate enough to apply in the future in their writing. This kind of response shows some level of confidence and satisfaction that the tool can provide beneficial writing help. Similarly, the scale "I want to recommend AWE feedback to others" also had a mean of 4.05 ($SD = 1.08$), showing that participants not only wanted to continue to use AWE themselves but also had sufficient confidence to recommend it to for others. The statement of "I will use AWE feedback often in the future," received a mean and standard deviation of ($M = 3.65$, $SD = 1.06$). Although this mean was lower than other items in the construct, it still falls within the "Agree" range, indicating positive intentions for continued use. The results show that students generally intent to use AWE feedback often in the future and recommend it to their peers.

3.3.1.7 Facilitating Conditions

Table 0.63

Descriptive statistics of Facilitating Conditions

Statements	N	Min	Max	Mean	Std. Deviation
24 I have the resources necessary to use AWE	37	1.00	5.00	3.9189	0.89376
25 I have the knowledge necessary to use AWE.	37	1.00	5.00	4.0000	0.84984
Facilitating conditions	37	1.00	5.00	3.9595	0.85292
Valid N	37				

The Facilitating Conditions construct assesses whether or not students believe they have access to the information and resources necessary in order to make effective use of the Automated Writing Evaluation (AWE) system. It is a significant construct because the willingness to employ a tool is distinct from the actual usage. The latter is based on whether or not the conditions surrounding them permit consistent and confident use of technology. The grand mean of this measure was $M = 3.96$ with a standard deviation of ($SD = 0.85$) which is located within the category of "Agree." This indicates that, overall, students perceived that they were satisfactorily prepared to use AWE with minimal obstructions.

The response "I have the skills necessary to use AWE" was slightly stronger ($M = 4.00$, $SD = 0.85$) than "I have the tools necessary to use AWE" ($M = 3.92$, $SD = 0.89$), yet they both fall under the category of "Agree". This indicates that students were confident in their ability to use the system. This gives more evidence to the fact that these students found the tool to be easy to use. Generally, the students significantly believed that they had the necessary material and intellectual needs for the use of AWE. These results demonstrate the feasibility of implementing such AI driven technology in the Algerian learning context. Therefore, integrating the virtual writing tutor inside the classroom can be easily achieved.

3.3.2 Analysis of Student's Interview:

The purpose of the post-treatment interview was to provide a qualitative dimension to the findings of the experiment by exploring in detail how students at different levels of achievement perceived the use of the Virtual Writing Tutor (VWT) as an Automated Writing Evaluation (AWE) tool. Nine students were interviewed individually, including three high achievers, three average achievers, and three low achievers. The interview was semi-structured in nature. It aimed to elicit students' views about their impressions of the tool, its usefulness in improving writing, and its effects on their autonomy, motivation, and intentions for future use. The presented analysis is thematically organized.

3.3.2.1 Students' overall impressions and perceptions of the AWE tool:

When they were asked about their overall impressions of the Virtual Writing Tutor, students across all achievement levels expressed positive perceptions of the tool. High achievers highlighted the reliability and usefulness of the tool in refining their writing. For instance, one student noted that it was trustworthy: *"This application is so helpful; it enhanced my writing and corrected my mistakes. I can defiantly rely on it."* Another high achiever added that it was expeditious because *"it gives me quick corrections on grammar and spelling, and sometimes even shows me new ways of structuring sentences."* And another mentioned its effectiveness in noticing errors and improving writing fluency *"The feedback helped me spot mistakes that I often miss, and the suggestions for better word choices really improved my writing."* Such statements illustrate how more proficient students perceived the AWE tool as an effective supplement that sharpened their awareness of detail and encouraged them to polish their work.

Average achievers also valued the tool, but their responses often combined praise with recognition of limitations. The first student represented its limitation compared to teachers'

feedback: *“I find the application useful and helpful and easy to use, but of course it can’t replace the teacher because it is not able to do what the teacher do. AI can’t be compared to humans, but it’s still nice to have an easy way to correct your mistakes”* Similarly, a second student said: *“the application is really good and useful; it can easily mentioned your mistakes and gives you the correction with also suggested words. But still we need teacher feedback on our work”*. Another expressed her neutral perception, stating: *“I find it not that good as well as not that bad”*. However, the third student reported an initially neutral attitude which shifted after discovering the tool’s features *“about evaluating the app if I was in play store, I’d give it 5 stars because it is so helpful. Actually, I didn’t realize how helpful it is at first but then when it showed me suggestion and compared my paragraph with red line and the new paragraph in green line I really loved that”*. Such a response suggests that acceptance of AWE tools may be enhanced when students are able to clearly see their progress through visual contrasts and when are exposed to its interactive and user-friendly design. These responses in general suggest that middle-level learners perceived the tool as helpful in handling surface errors, while simultaneously acknowledging that it lacked the interpretive capacity of human feedback.

Low achievers were the most enthusiastic about the tool, particularly for the way it boosted their confidence and reduced their anxiety about writing. One student remarked: *“I find the app very useful. It makes me feel comfortable and motivated to write without fear, because I don’t need to wait for the teacher anymore.”* Another stressed: *“It is very effective. It helps me correct grammar and spelling mistakes, and I depend on it a lot.”* *“This application is very benefit especially for students in university”* a third one expressed that the VWT functioned as a safe space to practice writing without the fear of being judged by teachers or peers. He expressed: *“the application is great actually it helped me a lot. I really feel shy and I sense embarrassed to ask the teacher to correct my*

paragraph because he could read my paragraph in high tone in front of everyone and I don't like that so this AWE made me use it alone “ These voices demonstrate that weaker learners tended to experience the tool as a liberating resource that allowed them to engage with writing more actively and independently as it offered immediate, private, and non-judgmental feedback.

In summary, the findings of the first question revealed that all students welcomed the VWT; high achievers saw it as a tool for refinement, middle achievers appreciated its utility but recognized its limits, and low achievers valued its emotional and motivational impact. This pattern indicates that the tool functioned in different ways depending on learners' proficiency: for the strong it sharpened accuracy, for the average it offered practice, and for the weak it built confidence.

3.3.2.2 Students' Perceived Effectiveness of AWE in Writing Development

The second theme investigated the perceived usefulness of the Virtual Writing Tutor in improving students' writing abilities. It encompasses three aspects, namely, the extent to which learners felt the tool helped them improve their overall writing level, their evaluation of its feedback across the core components of writing (grammar, vocabulary, mechanics, content, and organization), and the degree to which they incorporated this feedback into their final drafts.

Q2: Did it help you improve your level? How?

Here again, students agreed that it was beneficial, but they differed in emphasis. High achievers described measurable improvements in grammar, spelling, and vocabulary. One student observed: *“Yes, it definitely did, especially in grammar, spelling, and vocabulary. I could see progress each time I used it. Also, it has given me extra information about my level of writing or even my way of writing”*. Another high achiever reflected more cautiously, noting: *“In some way I would say, but over the long run it will definitely help me more because It makes my writing more*

accurate.”. Another student stated that the explanation provided with the feedback helped in long term memory of the correction; she stated: *“It really helped me in the exam; I noticed some mistakes that I wasn’t aware of especially in spelling and grammar. I remembered the rule and made sure not to repeat doing the same mistakes. I had problems in using comma and semi colons with conjunctions, but I don’t do them now “.*

Middle achievers’ perceptions demonstrated mixed results. The first student perceived the tool to have little impact on her level, so she answered by: *“AWE was not that very helpful most of the time it can correct mistakes Although it sometimes corrects words wrongly or make them out of context it still gives the correct spelling of a word which helps lean and remember how it is written for future use. I only have problems in spelling anyway”*. The second student recognized the impact of this tool on his writing level; yet appreciated the teacher feedback and discussion *“Yes, it helped me improve grammar, spelling, and enrich my vocabulary. But still, we need teacher feedback on our work. And I guess discussion to the teacher and exchange ideas is more inspiring and helpful”*. The third student reported the tools’ positive impact, *“the tool improved my writing productivity. My paragraphs became more correct so it helped me improve my level”*.

Low achievers again provided positive responses. According to them, it improved their general level, and they repeatedly associated the tool with comfort and encouragement. One said: *“it really helped me improve my level”*. Another explained: *“It was very helpful. I feel comfortable writing because I know the app will correct me.”*, while the third one explained *“It must be correct all the falses and grade me for grammar and vocabulary, my level is more good”*. Although the latter is phrased less cohesively, this comment shows that for these students, the immediate and the visible feedback provided by AWE tools was enough to boost their confidence and reinforce the sense that their writing skill is developing.

Q3: Did it provide helpful feedback in these components of the writing skill: grammar, vocabulary, mechanics (spelling punctuation), content and organization?

A key interview question asked whether the VWT provided helpful feedback across grammar, vocabulary, mechanics (spelling and punctuation), content, and organization. The responses demonstrated consensus on its strengths and weaknesses. Students across all groups agreed that the tool was strongest in detecting local errors, including grammar, vocabulary, and mechanics. However, they also expressed reservations about its ability to guide higher-order elements such as organization of ideas and content development.

High achievers in particular, were more explicit and aware about the tools' features. For example; the first student mentioned the ability of organizing paragraph sentences: *“Yes especially in grammar and punctuation. I also liked the suggestions it provided about each paragraph’s topic sentence. It made me see how am I organizing my ideas and see if my topic and supporting sentences are strong”*. The second student highlighted both the benefits and a potential drawback of reliance on automated feedback: *“Yes, I like the way it corrects my grammar and spelling mistakes. I think that the app is very helpful although it makes me lazy... Well, because sometimes I really don't care about making mistakes, because I know later on this website will correct everything for me. Sometimes I find myself making mistakes that I already know the correction for them. I mean, this happens, like, in the exam, because when I'm writing in my draft, I later find that I made mistakes and I start correcting them. It still makes me notice new errors that I didn't know I was making”*. The third student has underlined the interconnectedness between the teacher and the virtual writing tutor feedback: *“I felt it was helpful because after we discussed ideas together and you gave us inspiration on how to organize the paragraph, I only focused with expressing my ideas. Then, this website gave me more, how to say, suggestions on how to structure my sentences in a better way.*

Also, how to correct my mistakes, grammatical, spelling, and so on.”. This response demonstrated the positive perception of the complementary role of the tool to teacher content feedback.

However, average achievers had mixed views. Both limited abilities of the tools’ feedback and its strengths were highlighted. For instance, one student remarked: *“The feedback was useful. Although it sometimes corrects words wrongly or make them out of context, it still give the correct spelling of a word.”* Another said, *“Yes, it gave corrections in grammar and vocabulary, but for content and ideas I still relied on the teacher.”* Nevertheless, the third student expressed positive satisfaction about the feedback of this software: *“It provided all types of feedback, it can help you reformulate your paragraph in better way and show you the number of academic words you used and check grammar, punctuation, and it give advice about how to write and it even explained what cohesion is. I never understood the idea of it. It helped me in the exam”*

These findings suggest that average achievers benefit from the VWT primarily in mechanical and structural aspects of writing, such as grammar, spelling, vocabulary, and cohesion. However, the tool alone was insufficient for higher-level writing skills like content development and idea generation. This indicates that the teacher guidance remains essential for these students. Overall, the VWT appears to complement rather than replace teacher support for average-achieving learners.

Low achievers on the other hand, they appreciated the feedback provided by the virtual writing tutor in terms of grammar, spelling, and vocabulary. Their comments were broad and nonspecific regarding about other types of errors. The reoccurring answers were: *"it is a good way to correct your mistakes. "*, *"specially on grammar vocabulary "*, and *"in grammar , vocab, and spell words"*. For these students, the ability to identify and repair basic errors was sufficiently significant to warrant a positive evaluation.

Q4: Did you take the feedback it has given you into consideration when you made your final draft?

When the participants were asked this question, all students from various proficiency levels stated that they indeed used the feedback it provided which indicated a very high engagement and trust among them. For example, one higher achiever students stated: *“of course, I always use the feedback it gives me so I will have a good final paragraph.”*. Similarly, an average student stated *“I take the feedback which it gave me into consideration of course”*. Finally, a low achiever learner replied: *“... and take the errors of it on consideration”*.

However, only one Low achiever student stated that she hasn't applied all the feedback because of the fact that some of those errors were *“wrong”* or *“out of context”*, so she only applied *“spelling suggestions”* in order to *“remember how it is written for future use”*.

These findings indicate that students generally valued and trusted the VWT feedback. They also integrated it into their writing. Nevertheless, the exception among low achievers highlights that if the feedback is perceived as incorrect or contextually inaccurate, students may pertain from applying it. This is evident with this student's experience with spelling errors. Since she perceived the feedback from tool on errors to be correct, she applied the corrective suggestions.

3.3.2.3 Students' Perceptions about the Influence of AWE on Autonomy and Motivation

This section explores how students perceived the impact of the Automated Writing Evaluation (AWE) tool on their autonomy and motivation in writing. This section encompassed two key questions. The first one was about whether the tool helped them become independent in revising their work without relying on the teacher, while the second one focused on whether the tool motivated them to write.

Concerning Autonomy, students from different proficiency levels reported that the virtual writing tutor tool allowed them to become independent in revising their work without relying on the teacher. High achievers emphasized that the tool allowed them to work independently. For instance, the first participant stated: *“It made me independent and more engaged so I can correct my mistakes by myself without meeting the teacher.”* Another high achiever affirmed, *“Yes, it will make you depend on yourself without needing the teacher.”* Moreover, average achievers also recognized this benefit. For example, the third participant explained, *“It helps me to become more independent to learn and get information and understand without the teacher.”* However, the first student mentioned that she still needed the teacher feedback, indicating the dependence on instructor feedback is still appreciated: *“I worked by myself with this tool. It showed me my mistake, but I think I still need to have my teacher correct my errors”*. This indicates that while the VWT promotes autonomy, reliance on teacher feedback remains important for certain learners, particularly for clarifying complex or contextual issues. Finally, low achievers shared the similar prevailing perceptions. For instance, one student confirmed this by stating: *“It made me independent yes because you don’t need anyone to correct your mistakes anymore.”* These responses indicate that students across different proficiency levels felt that AWE supported self-directed learning and reduced reliance on teacher input.

Furthermore, students’ perceptions about the impact of AWE on their motivation were generally positive among the various types of learners. Students reported that the Virtual Writing Tutor (VWT) increased their willingness to write and engage with their drafts. For example, one student from the High achievement category stated: *“I can rely on it. It makes me feel motivated”*. Similarly, a student from Average achievement category reported: *“It gives me the desire to write more and more”*. Another student from this category mentioned *“Yes it really motivate me to use it”*

However, the same exception observed with the previous student occurred. This student stated, *“I didn’t really think that I was that much motivated, but I still enjoyed using the application and seeing in general the mistakes I had from the application.”*. This suggests that even when the tool does not strongly increase motivation, students may still value it for its practical support in identifying error. An example from the Low Achievement category includes a student stating that: *“it is a very motivated application and I think am not capable to don’t use it”*. This shows a strong engagement and enthusiasm for using the software.

3.3.2.4 Students’ Perceived Intention for Future Use

Finally, students were asked whether they intended to use the tool in the future. The response was overwhelmingly positive across all proficiency levels. On high achiever student stated that they have already started using it after the intervention: *“Well actually when I was preparing for the exam of literature module, I tried to already write a paragraph before going to the exam. I used the website to check if I have any errors, I found many (laughs).”*. Additionally, a student from the Average Achievers category stated that: *“I think I need more from this app, so I will be using it in the future”*. Other students said: *“I still use it always and I will use it in the future”*. And the exceptional student mentioned that she thinks *“it is more suitable for beginner, so I will recommend it for them.”*. Students from Low Achieving category indicated a strong intention to use it, stating that: *“I hope that we use more applications like these”* and *“yes, I will use it in the future”*.

Conclusion

This chapter presented the analysis and interpretation of the collected data. The results of the pre-test, post-test, and progress test were examined alongside the findings from the questionnaire and interviews. Together, these analyses answered the initial research question. The following

chapter will discuss the findings in relation to existing literature, showing both the strengths and limitations of integrating AWE tools in the Algerian EFL context.

Chapter four: Discussion, Recommendations, Limitations, and Suggestions for Future Research

Introduction	212
4.1 Discussion of the Findings	212
4.1.1 Discussion of the Research Question 1	213
4.1.2 Discussion of the Research Question 2	220
4.1.3 Discussion of the Research Question 3	224
4.2 Summary of the Main Findings	228
4.3 Recommendations	228
4.4 Limitations of the Study:	230
4.5 Suggestions for Future Research	231
4.5.1 Broaden Participant Demographics	231
4.5.2 Increase Intervention Time	232
4.5.3 Multiple AWE Tools Comparison	232
4.5.4 Integrate Peer Feedback	233
4.5.5 Focus on Affective Factors:	233
4.5.6 Impact of Automated Writing Evaluation on a Specific Achievement Level	234

4 Chapter four: Discussion, Recommendations, Limitations, and Suggestions for Future Research

Introduction

This chapter forms the final section of this doctoral thesis. It provides the discussion of the findings, offers recommendations for stakeholders, reflects on the challenges encountered during the research process, and identifies directions for future investigation. The key goal of the study was to evaluate the impact of Automated Writing Evaluation technology on the writing skills of second-year EFL students at Mohamed Lamine Debaghine University Setif 2. The research intended to examine the ability of AWE technology to thoroughly develop the skills of learners to write effectively. It took into account both the quantitative results and the learners' perceptions of the implemented tool, the Virtual Writing Tutor. The research used a mixed-methods quasi-experimental design with both experimental and control groups and were supplemented with pre- and post-tests, a post experiment students' questionnaire, and a semi-structured students' interview. The method allowed for triangulation of the data, thus presenting an integrated and holistic understanding of the impact of the integration of AWE.

4.1 Discussion of the Findings

This section discusses the major key findings of the study in relation to the three research questions posed at the beginning of this investigation. The discussion synthesizes the quantitative and qualitative data that are collected from the pre and post-tests, students' post-treatment questionnaire, students' post-treatment interview, and corpus analysis of students' written texts. The goal is to clarify the results, provide theoretical and pedagogical insights, and evaluate the significance of the findings within the context of writing instruction and the use of Automated Writing Evaluation (AWE) technologies.

4.1.1 Discussion of the Research Question 1

RQ1: What are the effects of Automated Writing Evaluation technology on Mohammad Lamine Debaghine second-year EFL students' writing skills?

The current study sought to test the measurable impact of Automated Writing Evaluation (AWE) technology through the use of the Virtual Writing Tutor on the writing skills of Mohamed Lamine Debaghine University's second-year English as a Foreign Language (EFL) learners. The primary sources of data for this study were the pre-test, progress test, and post-test scores of the experimental group, who received the AWE intervention, compared with the scores from the control group, who received only the traditional teaching methods. The quantitative analysis of the pre and post intervention scores provides empirical evidence of the impact of the Automated Writing Evaluation (AWE) technology on the improvement of the EFL students' writing skills.

The pre-test was carefully administered to both groups prior to the introduction of the intervention to establish a starting point for comparison. The statistical analysis using independent samples t-tests showed no substantial differences between the experimental and the control group's initial writing performances in all the assessed writing components (content, organization, vocabulary, grammar, and mechanics). This initial compatibility is important as it establishes homogeneity by ensuring that both groups had similar writing skills proficiency at the beginning of the experiment. This procedure reduces selection bias in order to ensure that the post-intervention differences can be attributed to the exposure to the AWE tools and not to any potential pre-existing variables (Trochim, 2006). The students' pre-test average scores demonstrated moderate writing proficiency, which is common for second-year EFL learners. This indicates that students were not performing at their highest possible level and that there was an opportunity for improvement in the

multiple writing subskills, which is a necessary condition for observing meaningful gains after the AWE intervention.

4.1.1.1 Assessing the Effectiveness of AWE Technology

After the treatment phase, which incorporated the Virtual Writing Tutor as an Automated Writing Evaluation software tool during writing instruction, the post-test scores were gathered and analyzed. First, to determine whether the intervention had measurable improvement in the experimental group's writing performance, a paired-samples t-test was conducted to compare its pre-test and post-test scores. The analysis revealed that the post-test scores improved significantly compared to its pre-test scores in the experimental group. These results confirm the positive effect of the virtual writing tutor on the writing skill. Second, to confirm that the progress made by the experimental group cannot be attributed merely to natural development or traditional classroom practice, two types of tests were conducted. These analyses include a paired-samples t-test to measure any potential improvement between the pre- and post-test of the control group, and an independent-samples t-test to measure the post-test scores of both the experimental and control group. The results indicate that the control group, which received traditional writing training without any access to AWE, showed minor and statistically insignificant score gains between its pre and post test scores. This indicate that the traditional method of teaching did not impact the writing skill in the conventional classroom settings. Furthermore, confirmed by independent samples t-tests, the experimental group outperformed the control group in the post-test by a substantial mean score difference. This indicates that the Automated Feedback Evaluation technology played a role in accelerating writing skill development in producing superior writing outcomes.

These findings are consistent with earlier research results which argue that AWE systems can improve students' overall writing skill. (Viantika & Dangin, 2024; Zein et al., 2025; Sinar et al., 2025). The tool gives fast, personalized, and consistent feedback, allowing learners to identify and correct errors more successfully than traditional techniques (Shermis & Burstein, 2013; Li & Link, 2020; Chen et al., 2024). AWE has accelerated the feedback process, which is beneficial for enhancing writing (Guo et al., 2023). However, this study contradicts the findings of Wang (2019) and Saricaoglu (2018). They both found no significant changes between the pre-test and post-test scores of both the experiment and control groups, indicating no significant improvement in students' writing skill performance.

The significant improvement in the current study can be attributed to several factors. First, this high achievement could be due to the metalinguistic explanations that the virtual writing tutor website has offered (Wondim et al., 2024). Also, they could be due to the unfocused corrective feedback, since the Virtual Writing Tutor (VWT) identified all the potential errors, presenting a broader range of learning opportunities for students (Colpitts and Howard, 2018; Aghajanloo et al., 2016). Additionally, unlike other AWE tools that use indirect corrective feedback, the direct feedback that the VWT has implemented in its feedback might have contributed to the observed impact on the writing skill (Mafulah and Basthomi, 2022). Finally, based on theoretical underpinnings, the observed significant impact can be linked to the ability of AWE to provide learners with tailored feedback that is suitable for their current level of proficiency, creating a developmentally appropriate scaffolding (Alghasab, 2025).

4.1.1.2 Improvements in Writing skill components

In addition to evaluating the overall performance of the experimental group, paired-samples t-test was conducted to examine progress across the five subcomponents of writing: content, organization, grammar, vocabulary, and mechanics. The purpose of this analysis was to assess the impact of automated feedback technology in a more detailed level, rather than viewing writing proficiency solely as a holistic construct. A paired-samples t-test was conducted to compare the pre-test and post-test scores of the experimental group across the assessed writing components.

The first subcomponent which was assessed was content. The experimental group's content scores increased significantly, indicating that students improved their ability in developing ideas, maintaining relevance present arguments more coherently. The experimental group's content scores increased significantly, indicating that students improved their ability to develop ideas, maintain relevance, and present arguments more coherently. The AWE tool likely facilitated this by encouraging iterative revision cycles, allowing learners to refine their arguments based on feedback. This study contrasts the findings of Sun & Fan (2022) who reported no significant gains in the experimental group's content scores with Pigai Wang aided assessment. However, this study is in alignment with the findings of Zhang (2024) which show that the combination of inputs from teachers and content-based Automated Writing Evaluation (AWE) system, the Virtual Writing Tutor, can directly improve content quality, particularly in critical writing tasks. Also, this is consistent with the study of (Cheng & Zhang, 2024) which found that using AWE feedback as a compliment assessment to teachers' feedback can also improve student's content. However, it is worth mentioning that this specific study implemented teachers' feedback after the feedback of the Automated Writing Evaluation tool which contrasts with current study's way of implementing both types of feedback. Furthermore, such improvement can be explained by the study of Bitchener and

Ferris (2012), who note that formative feedback enhances content quality in EFL writing. Both feedback from the teacher and Automated Feedback evaluation were formative in nature.

Moreover, there were significant statistical improvements in students' organization scores. Students seemed to be able to organize their writing logically, use effective formatting, and implement smoother transitions. The ability of the virtual writing tutor to provide feedback on cohesion might have made learners more aware of their organizational weaknesses. This aligns with Crossley et al. (2016) as they reported that automated feedback improved cohesion and coherence in student writing. Likewise, this study agrees with the findings of Sinar et al. (2025) who contended that AWE tools like Slick Write enhance the development and organization of ideas. However, the current study's results contradict with Chen and Cui (2022) as they indicated that iWrite, an AWE tool, did not yield any significant in the organization scores including cohesive devices and cohesive chains of the treatment group.

Grammar was the third assessed component. The results of the paired t-tests of the experimental group' pre and posttest indicated a major gain in the grammatical accuracy after the implementation of Virtual Writing Tutor (VWT). As AWE tools are best at detecting syntactic and morphological errors, these systems are also known to provide immediate corrective feedback to enable students to acquire the right forms. This concept of immediate grammatical feedback is supported by evidence, such as the work of Li et al. (2016) who confirmed that AWE improves grammatical accuracy by immediately detecting errors and providing suggestions for accurate corrections. Likewise, this study also aligns with Waer (2021) who found that students performed significantly better in grammatical knowledge after receiving automated feedback. However, the results of the current study differ from those of Li et al. (2017) who found no significant long-term gains in grammatical accuracy after the end of the same semester. Instead, they reported only short-

term effects, which referred to improvements made between the initial and final drafts of a single essay when students used the application during classroom tasks.

The subcomponent of vocabulary in this research endeavor demonstrated a considerable improvement. This aligns with several empirical studies including the one of Cotos & Huffman, (2018) where they found that “eWhile”, an AWE tools, provides tailored and direct lexical suggestions which in turn increase students' awareness of word choice and lexical appropriateness, resulting in a gradual enrichment of their writing vocabulary. Moreover, Luo and Liu (2017) demonstrated that vocabulary proficiency improved when learners used automated feedback. In the same vein, Dizon and Gayed (2021) confirmed that learners invested more effort in refining word choice; therefore, it resulted in richer and more precise written expression. In contrast, these findings do not align with those of Wonu et, al. (2024) as they found no significant improvements in vocabulary.

Mechanics improvements, including spelling and punctuation, were proved to be statistically significant. The use of automated error detection in such areas facilitated the ability of students to identify and correct surface-level errors instantly. These results agree with the findings of Burstein et al. (2016), Chen et al. (2022), and Barrot(2023) stated that AWE systems have improved students' ability to identify lower-level errors such as capitalization and punctuation. Also, they agree with Al Badi et al., (2020) which stated that Virtual Writing Tutor (VWT), for example, enhances linguistic accuracy including spelling. Nevertheless, the findings of the current probe do not align with those of Huang and Renandya (2018) as they found that an automated writing evaluation tool named Pigai did not result in any significant improvement across all writing components including mechanics. However, this study lasted only for two weeks and examined low proficiency learners only.

Besides evaluating statistical significance, the size of the gain, expressed through the effect size (Cohen's d), was persistently large ($d > 0.8$) across all items in the experimental group. This large effect size shows the educational gain to have been clear, thus validating the introduction of the use of machine learning technology to have yielded notable improvements in writing skill, and not slight and negligible improvements (Cohen, 2002).

However, it is worth mentioning that the performance of the control group during the quasi-experimental phase showed only minimal changes. While there were some slight numerical improvements in their writing scores from pre-test to post-test. However, most of these were not statistically significant. The only area that showed a meaningful difference was organization, where students demonstrated better ability to structure and present their ideas coherently. Nevertheless, when compared with the experimental group, it still outperformed the control group in terms of organization. In contrast, other components, such as content development, grammar, vocabulary, and mechanics, did not reflect significant gains. This suggests that the conventional teaching approach used with the control group was not sufficient to produce measurable progress in these areas. Overall, the control group's performance remained largely stable, with improvement limited to the organizational aspect of writing. These improvements can be attributed to the emphasis of written expression lessons on paragraph organization.

As a conclusion, the consistent statistically significant improvement in the experiment group across all stages of writing indicates that AWE technology enables overall skill development in writing, rather than simply adding to individual components.

4.1.2 Discussion of the Research Question 2

RQ2: What writing aspect(s) has more developed after the integration of Automated Writing Evaluation (AWE) technology?

This research question narrows the scope of the study by attempting to determine which specific subcomponents of writing that were the most positively influenced by the use of Automated Writing Evaluation technology, specifically the Virtual Writing Tutor, among Mohamed Lamine Debaghine Setif 2 University's second-year EFL students. While the first research question identified the use of the AWE technology to generally enhance the quality of writing, the aim here is to investigate which aspects of the writing, specifically content, organization, grammar, vocabulary, and mechanics, has benefited the most from the technology compared to the control group's performance.

Among all five writing components, grammar emerged as the most significantly improved area for students in the experimental group. The post-test scores showed a marked increase in grammatical accuracy, particularly in verb tense consistency, subject-verb agreement, article usage, prepositions, and sentence boundary issues. These types of errors are the most frequent and problematic for EFL learners, but they also fall within the detection and the correction capabilities of AWE systems. The Virtual Writing Tutor was not just an error-detection tool but also provided automatic explanations and remedial suggestions, thus helping students to understand and internalize rules that they had previously misunderstood or overlooked. This revision process that was marked by the giving of immediate feedback and the possibility of multiple revisions allowed for a deeper learning of grammar than was possible with conventional methods, where feedback was often delayed, limited, or too general. A series of independent sample t-tests assessed the five components' scores of pretest and posttest of both the experiment and control group.

The results were also confirmed through post-treatment questionnaire and interview where students with different levels of proficiency exhibited an increased sensitivity to grammatical structures. In the questionnaire, participants strongly agreed that the implemented Automated Writing Evaluation, taught them how to use correct grammar structure in their writing. Moreover, students with various achievements in the post test have all mentioned grammar to be one of the most improved components by the Virtual Writing Tutor.

Moreover, the mechanics component, which includes spelling, punctuation, and capitalization, was found to have the second highest improvement after grammar. The analysis of the pre-test and post-test scores of both EG and CG showed that the experimental group significantly reduced the occurrence of mechanical errors at the end of the experimental stage. These surface-level aspects of writing are often overlooked in traditional feedback, as instructors prioritize more global features such as content and organization due to time constraints. However, mechanical errors greatly impact the readability of written texts and are commonly found among non-native English speakers. The Automated Writing Evaluation tool proved to be highly effective in this area by identifying the errors instantaneously and often suggesting improved versions directly on the user interface. As such, students were not only informed of the errors but were further provided with multiple opportunities to engage in the processes of error detection and correction, thus maximizing their learning opportunities. Such improvement in scores is confirmed by the results of the post-treatment questionnaire since students strongly agree with the ability of VWT to improve their spelling and punctuation accuracy. Also, their answers in the post-treatment interview further confirms such results. Students of all levels of achievement demonstrated that the implemented tool helped them in spelling.

Furthermore, the vocabulary component showed measurable improvement, although to a lesser extent than the gains observed in grammar and mechanics. This was reflected in the questionnaire where students simply agreed with the idea that AWE suggestions make their sentences clearer by offering better word options. This indicated that students valued lexical suggestions as helpful for clarity and variety. The Virtual Writing Tutor provided vocabulary enhancement suggestions, academic term checks, and redundancy warnings, all of which supported more precise and varied word choices in students' writing after the post-test. Results from the post-treatment interviews help explain the moderate improvement in vocabulary. For example, high-achieving students mainly discussed grammar, punctuation, and organization, but they also noted that the tool sometimes made them aware of errors they had not previously noticed. In contrast, average-achieving students expressed mixed views. They appreciated the usefulness of spelling and vocabulary corrections, yet they noted that some suggestions were out of context. Finally, low-achieving students offered more general comments, often grouping grammar, vocabulary, and spelling together, which suggests they viewed the vocabulary feedback in a broad rather than detailed way.

Finally, the content and organization components showed the least development among the examined areas; however, both dimensions still demonstrated statistically significant growth compared to the control group. This limited progress can be explained by the moderately restricted capacity of the Virtual Writing Tutor to evaluate semantic complexity, coherence, and the logical organization of ideas. Such abilities represent higher-level writing skills that require sensitivity to context, audience, purpose, and reasoning; areas where current automated feedback algorithms remain slightly weak. Nevertheless, the writing of the experimental group displayed improvement, particularly in topic development and the increased use of cohesive devices. The enhanced topic development may be attributed to the extra time students were able to devote to content once grammatical corrections were handled automatically. Similarly, the more frequent use of cohesive

devices and clearer paragraph structure could be linked to students' regular exposure to the recursive process of self-editing using the tool's feedback. Interview insights supported these findings. High-achieving students acknowledged some benefits for paragraph organization, such as suggestions for topic sentences, but emphasized that teacher guidance was still essential for developing ideas. Average-achieving students noted that the tool helped them with cohesion and paragraph reformulation, yet they continued to rely on the teacher for content and idea generation. Low-achieving students, on the other hand, did not mention content or organization at all, focusing instead on grammar, vocabulary, and spelling. Together, these results suggest that while the tool raised some awareness of organization, its impact on content development remained limited, reinforcing the need for teacher support in higher-order writing skills. The latter were covered by the teacher after using the automated feedback evaluation tool which explains the improvement in content scores in the EG compared to those in the CG.

In summary, the areas of writing that showed the greatest improvement after the introduction of Automated Writing Evaluation technology were grammar and mechanics, followed by vocabulary, while content and organization showed modest improvements. The findings highlight the collective use of AWE tools in writing instruction. The tools are shown to be highly effective in improving surface features and revision processes; however, they should be supplemented by the introduction of human assessment to cover more in-depth aspects of the written text. The main benefit of the technology is its potential to release cognitive energy and instructional time, thus enabling both the student and the instructor to engage in more critical thinking and attend to content development after achieving linguistic accuracy. The implications for instructional practice are that the intentional integration of AWE tools can potentially improve the teaching of writing, especially

when supported by an experienced teacher who helps students comprehend feedback and transfer learning to multiple writing contexts.

4.1.3 Discussion of the Research Question 3

RQ3: What are the perceptions of Mohamed Lamine Debaghine second-year EFL students towards integrating Automated Writing Evaluation technology to improve writing skills.?

Implementing the Automated Writing Evaluation technology in the context of foreign language teaching has received much attention as a tool to improve the writing skills of students. This investigation seeks to explore the perceptions of Mohamed Lamine Debaghine University's second-year English as a Foreign Language students toward the use of the Virtual Writing Tutor technology to support the development of their own writing skills. Understanding these perceptions of the learners is important since they influence, to a large extent, the level of motivation, engagement, and overall effectiveness of the technology-enhanced language learning program (Bitchener, 2021; Venkatesh & Davis, 2000).

The findings from the post-experimental questionnaire and the semi-structured interviews indicate that students generally held positive attitudes. This was shown by the frequent selection of “Agree” and “Strongly Agree” across all questionnaire items. Such results reflect a favorable orientation of the experimental group students toward the use of AWE technology. These results show that students were generally in favor of using AWE technology. Their positive views suggest that they are more likely to accept and continue using such tools in their learning. This is important because when students support a technology, it increases the chances that the system will be successfully adopted and maintained in the long term (Liu,2024).

4.1.3.1 Perceived Usefulness and Enhancement of Writing Skills

One of the major findings concerns the evaluation made by the students of the VWT's effectiveness. The questionnaire results showed high mean scores for items that measure the tool's ability to help students identify and understand their writing errors. This result is consistent with previous research showing that students value the immediate, clear, and detailed corrective feedback provided by AWE tools, which frequently outperforms the delayed and sometimes ambiguous feedback traditionally provided by teachers (Bitchener & Ferris, 2012; Li, Link, & Hegelheimer, 2020). Likewise, Parra and Calero (2019), Moussalli & Cardoso (2020), Wang et al. (2022) from Ecuador reported that learners perceived Grammarly and Grammarly as useful since they improved students' writing performance. And differ from Wilken (2016) who reported the participants' negative perceptions.

During the interview, the students expressed that the feedback given through the VWT helped them identify grammatical, spelling, and structural mistakes more effectively than they had before. This shows that AWE tools not only help to correct mistakes but also develop metalinguistic awareness, which is an important element in the autonomous language acquisition process (Hyland, 2003).

4.1.3.2 Ease of Use and User-Friendliness:

One area where the students showed high consensus relates to the system's ease of use. They saw the VWT interface to be understandable and easy to use, thus showing signs of being able to overcome the technology barriers often witnessed in computer-supported learning scenarios. According to Davis's theoretical framework of Technology Acceptance Model (1989), the ease with which users perceive technology to use is fundamental to determining technology adoption, mainly

among students who have limited exposure to computer programs. The positive assessments in this study indicate that the VWT was not considered difficult or confusing, which is essential for long-term use and for creating positive outcomes in teaching and learning.

The results from the interview further confirmed this view that the simplicity of the tool allowed the students to focus on writing their drafts rather than struggle with complicated functionalities of the software. This supports the Technology Acceptance Model (TAM), which states that ease of use strongly influences how useful learners find a tool and, in turn, their intention to continue using it (Venkatesh & Davis, 2000). Similarly, these findings align with Kim & Song (2024) who reported that AI grammar checkers were viewed positively by Korean students due to their accuracy in detecting grammar errors, ease of use, and provision of clear feedback that supports self-directed learning. However, they differ from of Colin (2020) and Nunes (2019) who found that students felt frustrated due to the inappropriate and insufficient feedback provided by the Write & Improve tool, which resulted in them questioning its overall effectiveness.

4.1.3.3 Autonomy and Motivation

The results of the study also revealed that a high level of learner autonomy was promoted through the use of the AWE technology. Participants emphasized that receiving instant feedback, which allowed them to edit their own writing, was a major advantage. Such autonomy is the basis of self-directed learning, which has been shown to be an important predictor of achievement in areas concerning language learning (Zimmerman, 2002). Additionally, they expressed an increased willingness to engage with the writing process. The immediate and interactive nature of the instrument was also described as engaging and rewarding. The AWE instrument appeared to meet at least two fundamental needs of learners by strengthening learners' sense of competence in writing and giving them greater autonomy in their learning. The interview responses confirmed that students

across all levels of achievement felt more independent in revising their work without waiting for the teacher, and many reported that the tool increased their willingness to write and re-draft. Low achievers especially valued the non-judgmental feedback, which allowed them to practice writing without embarrassment.

The reported improvement can be directly linked to students' perceptions as Ranalli (2021) and Liu (2024) discovered that the perceived trust and ease of use further influenced students' motivation and autonomy, which improved their engagement and ultimately enhanced their learning. However, these findings contrast with Kim and Song (2024), who reported that AWE tool did not significantly increase students' motivation or interest in writing, nor did this tool provide sufficiently detailed feedback. Their study highlighted an ongoing reliance on teacher support which may decrease learners' autonomy.

4.1.3.4 Behavioural Intention and Future Use

The students showed a very strong willingness to continue using the AWE technology after this study ended. This result is important since the continued use is central to realizing long-term improvement in writing ability (Venkatesh et al., 2003). The students were very keen on incorporating AWE tools into their personal practice, which suggested that they appreciated the benefits that the technology offers in supporting regular writing practice. The analysis of the interview further supports this claim as they reported a consensus in continuing to use the Virtual Writing Tutor and recommending it to others, especially for beginners.

4.1.3.5 Facilitating Conditions

The information gathered through the administered questionnaire showed that students felt that the available infrastructure and support were adequate for effective use of the AWE tool.

Computer and mobile availability, internet connectivity, and technical support were viewed to be satisfactory for using the tool.

4.2 Summary of the Main Findings

The study was conducted with two intact groups of second-year students at Mohamed Lamine Debaghine University, one receiving writing instruction supported by AWE technology and the other following conventional instruction. The preliminary stage confirmed that students regarded writing as the most difficult of the four skills, with particular challenges in grammar, vocabulary, organization, and mechanics, and they expressed dissatisfaction with delayed and subjective teacher feedback. Results from the pre, progress, and post-tests indicated that the experimental group achieved significant improvement in overall writing performance, while the control group showed no noticeable progress. The greatest gains were observed in grammar and mechanics, followed by vocabulary, organization, and content, with the more complex aspects of writing showing less improvement due to the limitations of automated feedback. Post-questionnaires and interviews further revealed that students held positive perceptions of AWE, describing it as easy to use, motivating, and supportive of autonomy. Many also emphasized the value of instant feedback, reporting greater confidence and reduced writing anxiety, which encouraged them to engage more actively with the writing process.

4.3 Recommendations

Based on the implications of this study, the following series of pedagogical and institutional recommendations are proposed to maximize the benefits of using AWE technology to teach EFL writing.

First, concerning educators, integrating AWE technology as a supplementary tool is imperative. Teachers should use AWE tools in combination with traditional instruction to provide

learners with instant and detailed corrective feedback, particularly in grammar and mechanics. This technology integration can also alleviate the burden and save time for instructors by allowing them to concentrate more on content development and on fostering higher-order competencies.

Moreover, providing detailed guidance on the comprehension of AWE feedback is recommended to avoid confusion, especially among weaker learners. Teachers should schedule teaching time for efficient interpretation and use of automated feedback. Structured workshops or sessions for the use of AWE tools are suggested to enhance the self-regulatory skills of the learners. Finally; encourage peer collaboration is essential. Teachers can encourage students to use the AWE system collaboratively. For instance, students may review each other's drafts after obtaining the feedback from an Automated Writing Evaluation (AWE) tool. This combination of machine guidance and human input through peer feedback is useful to improve overall writing skill and raise motivation for students.

Second, for students, highlighting the value of independent learning is paramount. Students should engage actively with AWE tools to evaluate, revise, and reflect on their writing. Regular use of these tools could increase writing confidence and reduce the overdependence on instructors for error correction, therefore, increasing the chances for writing practice. Additionally, developing critical feedback literacy is important for students. They need to learn to assess and use automated feedback discerningly, distinguishing between suggestions that improve clarity and accuracy and those that might not best convey their intended message. Furthermore, students should use AWE as a development tool rather than relying solely on final submissions. It is critical that students use AWE at various times throughout the iterative draft-and-edit process to continually refine their writing.

Additionally, curriculum designers and institutions are recommended to incorporate AWE technology into the writing curriculum. Institutions should consider the official inclusion of AWE tools in their writing classes to facilitate continuous formative assessment and technology-enhanced learning environments. Moreover, they are encouraged to invest in infrastructure and teacher training. Provision of stable internet connectivity, hardware, and support is critical to the integration of AWE with success. Institutions should also provide professional development opportunities to members of the faculty to ensure the appropriate and proper utilization of the technologies. Finally, promoting blended learning models through combining face-to-face instruction with online AWE-supported writing activities can optimize learning outcomes, accommodate diverse learner needs, and prepare students for technology-rich academic and professional contexts.

4.4 Limitations of the Study:

Despite the positive results and findings obtained from this study, it is important to acknowledge several limitations.

- Sample size and scope: The study was limited to two intact cohorts within only one department at Mohamed Lamine Debaghine University, therefore limiting the generalizability of the findings to other populations or various educational settings.
- Restricted length of the intervention: The trial lasted for only one academic term, which might be too short to detect lasting long term improvements or changes for complex writing skills like argumentation and critical analysis.
- Use of a Single AWE Device: The current study only used one AWE device, which might not fully represent the effectiveness of other technologies that might offer different feedback modalities or user interfaces.

- Assessment subjectivity: Although an analytic rubric had been instituted for the evaluation of the writing, the researcher independently graded the work because of the logistical requirements, thus limiting inter-rater reliability.
- Limited peer interaction: Students showed reluctance to engage in peer feedback through the AWE platform due to lack of trust and unfamiliarity with peer assessment, potentially limiting collaborative learning benefits.

4.5 Suggestions for Future Research

As the current study has proved its efficiency through the evaluation of the influence of AWE on the Algerian university students' writing skills, it has at the same time revealed numerous limitations that future research can overcome to provide more universally usable, advanced, and integrated knowledge. The following recommendations are provided as possible directions for future research:

4.5.1 Broaden Participant Demographics

Future research would need to involve larger and more heterogeneous cohorts from diverse geographical sites, institutions, and educational programs. The current study included only one department at Mohamed Lamin Debaghine Setif 2 University; while this concentration yielded useful initial results, it necessarily limits the generalizability of its implications. Expanding the participant group to comprise learners across several universities, regions, or nationalities with unique linguistic, cultural, and educational backgrounds would enable future research to accurately gauge the influence of AWE aids across disparate cohorts of EFL learners. This research would examine the extent to which sociocultural influences, divergent levels of digital proficiency, or educational policies influence the efficacy of AWE. Additionally, drawing upon students across

various academic fields—not only those concentrating on the subject of English—would clarify the ways in which AWE develops the facility to write across the context of ESP (English for Specific Purposes).

4.5.2 *Increase Intervention Time*

This study was limited to one academic semester, which was sufficient for assessing short-term benefits but may not have completely captured the long-term impacts of AWE use on writing improvement. To test learning gains' durability and how AWE feedback affects learners' writing, future research should be longitudinal, ideally spanning an academic year or more. Longer intervention durations may also allow researchers to track learners' attitudes, feedback literacy, and writing behaviours over time, providing a more thorough and temporally sensitive explanation of AWE's involvement in language learning. Researchers may also find limitations, regressions, or variations in learning patterns that shorter-term studies overlook.

4.5.3 *Multiple AWE Tools Comparison*

The present research used Virtual Writing Tutor, a single Automated Writing Evaluation (AWE) system that is beneficial and efficient. Each AWE system has distinct algorithms, interfaces, feedback, and educational paradigms. Thus, comparing two or more AWE systems might reveal their strengths and weaknesses. This research may determine the best tools for low-proficient learners, the most accurate and educationally relevant feedback, and the interface characteristics that maximise learner engagement and understanding. Comparing rule-based and AI-assisted models (e.g., platforms with GPT incorporated) may reveal variations in personalisation, feedback quality, and composition output. These comparisons would also help teachers, course designers, and decision makers make informed writing technology judgements.

4.5.4 Integrate Peer Feedback

AWE was the major emphasis of the present study, although peer feedback—an essential part of process writing pedagogy—was neglected. Future studies may examine how automated feedback and peer-to-peer comments complement and challenge each other. Researchers may investigate if peer feedback helps integrate AWE insights or whether AWE makes peer reviews more effective by preparing the learners ready to provide meaningful linguistic and structural critiques. A crucial area for future investigation is comprehending how students perceive and evaluate peer-generated feedback in relation to that offered by automated writing assessment systems. To enhance the efficacy of peer feedback, researchers could contemplate the use of structured scaffolds, such as peer review checklists that correspond with the assessment criteria utilised in AWE tools. This method may enhance students' feedback literacy while fostering more concentrated and cooperative peer interactions.

4.5.5 Focus on Affective Factors:

The present study drew attention to students' motivations and perceptions; however, future research needs to take a more systematic and in-depth look at the affective aspects involved in the use of Automated Writing Evaluation (AWE) technology. Writing involves not just cognitive but emotional and psychological aspects as well, especially for English as a Foreign Language (EFL) learners, who often suffer from anxiety, evaluation stress, and low self-confidence. Future studies could use mixed-methods or qualitative designs to examine the effects of long-term interaction with AWE technologies on students' anxiety, self-confidence levels, motivation, and attitude towards writing. Longitudinal diary studies, focus group interviews, and student diaries could provide rich information on the affective variables involved in AWE technology use. Future studies could also

examine whether individual learner traits (such as introversion/extroversion, self-regulatory capacities, and levels of language anxiety) affect how students use and learn from AWE technologies.

4.5.6 Impact of Automated Writing Evaluation on a Specific Achievement Level

Future studies are recommended to focus on individual categories of learners. For example, researchers could investigate the impact of AWE on either high achievers or low achievers in order to gain a deeper understanding of its specific influence on students' writing skills.

General Conclusion

This research aimed to examine the effect of Automated Writing Evaluation (AWE) technology on the enhancement of writing skills among second-year English as a Foreign Language (EFL) students at Mohamed Lamine Debaghine Setif 2 University. Motivated by the growing integration of digital tools in education and the urgent need to strengthen writing instruction in Algerian higher education, the study employed a mixed-methods design, combining quantitative and qualitative approaches. The research was informed by theories of formative feedback, autonomy-supportive learning, and technology-enhanced teaching, and it explored both the impact of AWE on students' writing performance and their perceptions of its integration across different proficiency levels.

The study's findings provided evidence for the educational benefits of AWE technology. Quantitative results from the pre- and post-tests demonstrated statistically substantial enhancements in the writing performance of the experimental group compared to the control group across all evaluated subcomponents, including, content, organization, grammar, vocabulary, and mechanics. These improvements indicate that regular engagement with AWE feedback may promote significant advancement in learners' capacity to generate coherent, linguistically precise, and well-structured written compositions. The improvement in grammar and mechanics components, which are often identified as enduring difficulties for many EFL learners, was very significant. The findings therefore validate the findings of previous studies who highlighted the efficacy of AWE in these writing components. Alongside quantitative improvements in the writing skill, the qualitative data derived from post-treatment surveys and semi-structured interviews provided profound insights into students' individual experiences and impressions of the AWE tool. Students generally expressed favorable views towards the incorporation of AWE. They perceived it as a beneficial, accessible,

and motivating tool that aided them in identifying and comprehending their errors. The tool was perceived as very beneficial for fostering learner autonomy, since it allowed students to independently modify their work at their own speed without depending only on the teacher's feedback. Moreover, students emphasized the promptness and lucidity of the feedback, enabling them to address particular concerns instantaneously. This benefit is seldom attainable in conventional classrooms due to large class size and time limitations of written corrective feedback in contexts where superficial correctness is essential.

Students of varying proficiency levels seemed to benefit from the tool in distinct ways. High-achieving students used AWE to refine their work and rectify minor errors, but lower-achieving students valued the systematic assistance it offered in detecting fundamental grammatical or lexical problems. Also, they described the tool as a confidence-builder that reduced their writing anxiety, motivated them to write more, and allowed them to practice privately without fear of judgment. This discrepancy highlights the adaptability of AWE tools and its capacity for personalized feedback and responding to diverse learner requirements and skills. The study indicated that some students expressed concerns regarding occasional inaccuracies in the feedback and in the tool's limited ability to identify deeper issues related to coherence or content development. This reinforced the notion that AWE should complement, rather than replace human instruction.

The results advocate for a more integrated use of technology in writing training from a pedagogical perspective. Educators may use AWE as a formative feedback instrument to enhance their instructional impact and foster student autonomy. AWE technologies may be beneficial when instructor feedback is often belated or inadequate due to hindering factors such as time constraints and large size classrooms. Furthermore, the study proposes a systematic and coherent method for integrating Automated Writing Evaluation (AWE) into the writing process. AWE is not only

beneficial for correcting errors but also facilitates deeper thinking, encourages revision, and fosters gradual enhancement of writing skills among students.

However, the research has several limitations. The generalizability of the results is limited by the small sample size, short intervention period, and dependence on a single AWE instrument. Furthermore, even if the data collecting instruments were thorough, more triangulation from teacher observations or insights could have improved the study. These constraints, however, also present future research opportunities including longitudinal studies, comparative evaluations of several AWE tools, and investigations of the emotional and cognitive aspects of AWE use.

This study enhances the existing information about the use of technology in foreign language writing instruction by providing empirical evidence for the incorporation of AWE tools in Algerian university settings. The research illustrates that AWE may significantly improve students' writing performance and cultivate a favorable learner attitude, thus, highlighting the potential of such technologies to revolutionize conventional writing teaching methods. AWE serves not as a threat to the teacher's role, but as a supplementary support mechanism that empowers both learners and educators in achieving more effective, learner-centered, and technologically enhanced writing instruction. As digital technologies advance, it is essential for language educators, researchers, and policy-makers to collaborate in order to fully exploit their pedagogical potential in a manner that is contextually relevant, theoretically informed, and learner-centered.

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Appendix A. Administrative Request Permission to Conduct the Research

إلى السيد رئيس القسم
اللغة والأدب الإنجليزي
كلية الآداب والعلوم
جامعة محمد ليين ديانغ
صطية -

الآنسة = يوحيد الله صابرة
رقم الهاتف = 0558, 25, 96, 15
البريد الإلكتروني =

الموضوع = طلب إجراء دراسة ميدانية

يشرفني أن أتقدم إلى سيادتك الموقرة بعذات الطلبة والمتمثل في
مواقفكم على إجراء دراسة ميدانية مع طلبة اللغة الإنجليزية
وكذا مواظبتكم على التقدير من مخير الإسلام الآتي للإستعمال
أجهزة الكمبيوتر مع عينة البحث

أحيطكم علما أنني طالبة دكتوراه شعبة لغة وأدب إنجليزي
تخصص تعليمية اللغة الإنجليزية بجامعة حميدة بن بوعلي - الشلف -

في انتظار ردكم تقبلوا مني خاتمة الإسترام

إمضاء الموقرة:

رئيس القسم:
بمراجعة
قسم اللغة والأدب الإنجليزي
كلية الآداب والعلوم
الأستاذة: كوسسة نوفيسق

Appendix B. Signed Consent Form by the Participants of the Experiment

Participant Consent Form

N	Participant's full name	Signature
1	Larfa Belkhis	
2	BRAHIMI Amel	
3	Belgarouf Manel	
4	Kestel Hamida	
5	KHOUATRA Maria.	
6	HASSED Sifram	
7	Boudjamine yasmine	
8	Chaharate Shop	
9	Bellouchi Mehdi	
10	ZIGHMI AKRAH	
11	MAYOUF Abdelouar	
12	D. Saoudie Rania	
13	Harche Omnia Douaa Ennour	
14	GUEZZI Meriem	
15	Taleb Meriem	
16	Mekarima Ouissal	
17	Dekhila Ikhem	
18	Benhamadou Ajet - El - Ghofrane	
19	Boussaadia Mihed	
20	Gadourou Samia	
21	Azizi Aya	
22	Louchati Tayma	
23	BenLahcene Feynel	
24		
25	GOUCEM Hasna	
26	Harmata S. F Eddine	
27	SEBAA Douaa	
28	Aftis Kawther	
29	Ben Rabba Homati	
30	Kediga Yasmine	
31	Chishem Aklem	
32	Kannoufi Souma	
33	Moulhadj Salsabil	
34	Nouri Amour	
35		
36		
37		
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Appendix C. Second Year (S3+S4) Written Expression Hourly Volume

Semestre 3

— Révision programme CPND LLE 2020/2021 —

جامعة القاهرة
 كلية التربية
 قسم اللغة الإنجليزية
 إشراف
 أ. د. محمد عبد الحليم
 أ. د. محمد عبد الحليم



Unités d'enseignement	Intitulé des matières	Crédits	Coefficients	Volume horaire hebdomadaire			Mode d'évaluation	
				Cours	TD	TP		
U E Fondamentale Code : UEF 2.1 Crédits : 8 Coefficient : 4	Compréhension et expression écrites 3 ¹ Compréhension et expression orales 3 ²	4	2		3h00	45h00	55h00	50%
					3h00	45h00	55h00	50%
U E Fondamentale Code : UEF 2.1 Crédits : 8 Coefficient : 4	Grammaire de la langue d'étude 3 Linguistique et phonétique 3 ³	4	2		3h00	45h00	55h00	50%
					3h00	45h00	55h00	50%
U E Fondamentale Code : UEF 2.1 Crédits : 2 Coefficient : 1	Littératures de la langue d'étude 1	2	1		1h30	22h30	27h30	50%
U E Méthodologique Code : UEM 2.1 Crédits : 9 Coefficient : 5	Techniques du travail universitaire 3 Lecture et étude de textes 3 Littératures numériques 1	4	2		3h00	45h00	55h00	50%
					3h00	45h00	55h00	100%
					1h00	15h00	10h00	100%
U E Découverte Code : UED 2.1 Crédits : 2 Coefficient : 2	Civilisations de la langue d'étude 3	2	2		1h30	45h00	5h00	50%
U E Transversale Code : UET 2.1 Crédits : 1 Coefficient : 1	Langue(s) étrangère(s)	1	1		1h30	22h30	2h30	100%
Total Semestre 3		30	17	1h30	23h30	375h00	375h00	

1 Dans les matières « Compréhension et expression écrite » et « Compréhension et expression orale » et durant tout les semestres, le portfolio est demandé. Il est évalué par l'enseignant de la matière dans la note de TD.
 2 Dans les matières « Compréhension et expression écrite » et « Compréhension et expression orale » et durant tout les semestres, le portfolio est demandé. Il est évalué par l'enseignant de la matière dans la note de TD.
 3 A appliquer comme matières semestrielles (pour chacune 1 semestre) ou annuelles avec une note commune (présent de la moyenne des deux évaluations) ou selon une forme similaire. Le choix est laissé aux responsables pédagogiques de chaque filière.
 * Autre = Travail complémentaire en consultation semestrielle ; * CC = Contrôle continu.



— Révision programme CPND LLE 2020/2021 —

Semestre 4

Unités d'enseignement	Intitulé des matières	Crédits	Coefficients	Volume horaire hebdomadaire			VHS (15 semaines)	Mode d'évaluation	
				Cours	TD	TP		CC*	Examen
U E Fondamentale Code : UEF 2.2 Crédits : 8 Coefficient : 4	Compréhension et expression écrites 4 ¹	4	2		3h00		45h00	50%	50%
	Compréhension et expression orales 4 ²	4	2		3h00		45h00	50%	50%
	Grammaire de la langue d'étude 4	4	2		3h00		45h00	50%	50%
U E Fondamentale Code : UEF 2.2 Crédits : 8 Coefficient : 4	Linguistique et phonétique 4 ³	4	2		3h00		45h00	50%	50%
	Littératures de la langue d'étude 2	2	1		1h30		22h30	50%	50%
U E Méthodologique Code : UEM 2.2 Crédits : 9 Coefficient : 5	Techniques du travail universitaire 4	4	2		3h00		45h00	50%	50%
	Lecture et étude de textes 4	4	2		3h00		45h00	100%	100%
	Littératures numériques 2	1	1		1h00		15h00	100%	100%
U E Découverte Code : UED 2.2 Crédits : 2 Coefficient : 2	Civilisations de la langue d'étude 4	2	2		1h30		45h00	50%	50%
	Langue(s) étrangère(s)	1	1		1h30		22h30	100%	100%
Total Semestre 4		30	17	1h30	23h30		375h00	375h00	

1 Dans les matières « Compréhension et expression écrites », « Compréhension et expression orale » et durant tous les semestres, le portfolio est demandé. Il est évalué par l'enseignant de la matière dans la note de TD.
 2 Dans les matières « Compréhension et expression écrite », « Compréhension et expression orale » et durant tous les semestres, le portfolio est demandé. Il est évalué par l'enseignant de la matière dans la note de TD.
 3 A appliquer comme matières semestrielles (pour chacune 1 semestre) ou annuelles avec une note commune (résultat de la moyenne des deux évaluations) ou selon une forme similaire. Le choix est laissé aux responsables pédagogiques de chaque filière.
 * Autre = Travail complémentaire en consultation semestrielle ; * CC = Contrôle continu.

Appendix D. Students' Preliminary questionnaire

Dear students:

Thank you for participating in this research questionnaire, which is part of a PhD study focused on exploring the challenges students encounter when writing in the classroom. Your insights are essential for understanding the obstacles faced during writing tasks and will contribute to developing more effective teaching methods and support strategies. Please answer the questions as honestly and thoughtfully as possible. Your responses will remain confidential and will be used solely for academic purposes. **Instructions: Please read the statements below and select the option that best reflects your opinion (SA = Strongly Agree, A = Agree, N = Neutral, D =**

No	Statements	SA	A	N	D	SD
1	I find most writing tasks difficult to do					
2	I do not have sufficient linguistic knowledge					
3	I do not have sufficient content knowledge.					
4	I do not have enough general knowledge about the topics.					
5	I have low self-confidence toward writing tasks					
6	I have great amount of anxiety when writing because I fear my teachers' judgment about my mistakes					
7	I do not write because I think I will not need such writing in future					
8	I do not have enough motivation to write.					
9	We do not have adequate writing activities to encourage us to write					
10	I do not receive sufficient feedback from teachers					
11	I do not receive enough writing instruction in class					
12	I do not know enough writing strategies such as prewriting, drafting, or editing.					
13	I am unable to organize my thoughts while writing.					

Disagree, SD = Strongly Disagree).

Writing task: Please write a paragraph about the problems you face when writing and the reasons behind these problems:

Appendix E. Teachers' Preliminary Interview

1. How would you evaluate the overall quality of your second-year students' writing level?
2. What are the most common challenges that students face when writing?
3. What do you think are the primary reasons behind students' difficulties in writing skills?
4. Do you believe these challenges stem more from personal factors (e.g., lack of practice) or educational factors (e.g., teaching methods, curriculum)?
5. How do you provide feedback to students on their writing?
6. In your experience, how effective is feedback in helping students overcome their challenges?
7. Are there any barriers that prevent students from using feedback effectively?
8. What teaching methods or strategies do you use to help students improve their written expression

Appendix F: Placement Test Version A

Placement Test A

Choose the correct answer.

- 1 He ... my friend.
a) am b) is c) are d) be
- 2 We ... English.
a) isn't b) not c) aren't d) don't
- 3 ... they English?
a) Do b) Is c) Are d) Be
- 4 A: Are you a student? B: Yes, I ...
a) are b) is c) be d) am
- 5 A: ... your name? B: Maria.
a) What's b) Who's c) Is it d) What call
- 6 A: ... is that man? B: My father.
a) Who b) Whom c) What d) Which
- 7 A: ... are you? B: Ten.
a) How b) What age c) How much d) How old
- 8 A: ... girls are here? B: Eight.
a) How much b) How many c) Which d) What
- 9 It's ... house.
a) they b) them c) theirs d) their
- 10 ... are friends.
a) We b) He c) Our d) Them
- 11 My rabbit is white. ... name is Snowy.
a) It's b) It c) Its d) It is
- 12 ... car is black.
a) Theirs b) They c) Them d) Their
- 13 They like ...
a) we b) us c) our d) ours
- 14 The party is ... Monday.
a) to b) on c) in d) at
- 15 They are ... London.
a) to b) on c) by d) in
- 16 I go to bed ... 10 o'clock.
a) in b) for c) at d) to
- 17 His birthday is ... March.
a) on b) to c) in d) at
- 18 Susan is ... home.
a) to b) at c) in d) by
- 19 ... down!
a) Sit b) Sat c) Sitting d) To sit
- 20 ... talk!
a) Don't b) Not c) No d) Didn't
- 21 Come here and look at ... painting.
a) those b) that c) these d) this
- 22 Who are ... boys over there?
a) these b) this c) those d) that
- 23 Mrs Brown is ... teacher.
a) – b) an c) a d) any
- 24 Here is ... apple for you.
a) an b) a c) – d) any
- 25 New York is in ... United States of America.
a) the b) – c) an d) a
- 26 This is a photo of our two dogs. My dog is ... old dog near the tree.
a) an b) – c) a d) the
- 27 A: Where's dad? B: In ... garden.
a) one b) a c) – d) the
- 28 Three ...
a) box b) boxes c) boxes d) boxies
- 29 Two ...
a) woman b) women c) womans d) womens
- 30 Four ...
a) foot b) foots c) feet d) feets
- 31 She is ...
a) Britain b) England c) the UK d) British
- 32 Is it hot in ... ?
a) Greece b) Greek c) the Greece d) Greeks
- 33 He is ...
a) tall b) long c) up d) high
- 34 There's a big blackboard in our ...
a) bedroom b) kitchen c) garden d) classroom
- 35 $3 + 2 = \dots$
a) five b) fifth c) fife d) fifty
- 36 (1st) first, (2nd) second, (3rd) ... , (4th) fourth
a) three b) third c) thirteen d) thirteenth
- 37 It's (10.30) ...
a) thirty past ten b) thirty to eleven
c) half past ten d) half to eleven
- 38 It's (1.45) ...
a) quarter past one b) fifteen to two
c) forty-five past one d) quarter to two
- 39 It's (2.40) ...
a) forty past two b) twenty to three
c) twenty past two d) forty to three
- 40 A: How are you? B: ...
a) Thank you. b) Fine, thanks. c) How are you?
d) I'm Maria.
- 41 A: Can he sing? B: No, he ...
a) can't b) isn't c) not d) doesn't
- 42 They can ...
a) dancing b) to dance c) dance d) danced
- 43 We like ...
a) walk b) to walking c) walking d) walked
- 44 Can he ride ... bicycle.
a) the b) a c) – d) on
- 45 I've got ... headache.
a) a b) an c) – d) the
- 46 A: ... is it? B: It's five euros.
a) How many b) How c) What cost d) How much
- 47 A: What ...? B: They're doctors.
a) do they b) are they doing c) do they do
d) they do
- 48 A: ... do you watch TV? B: Every evening.
a) How much b) How often c) How many d) Why
- 49 A: ... bag is this? B: It's my bag.
a) Whom b) Who c) Which d) Whose
- 50 I ... a computer.
a) haven't got b) not have c) don't got d) don't

- 51 A: Has she got a brother? B: Yes, she ...
a) has b) got c) have d) does
- 52 ... three cinemas here.
a) They are b) There are c) There is d) It is
- 53 Is there a park here? No, ...
a) it isn't b) there aren't c) there isn't d) they aren't
- 54 There are ... books on the table.
a) some b) one c) any d) a lot
- 55 We haven't got ... red pencils.
a) much b) some c) a d) any
- 56 Is there ... water?
a) a b) any c) many d) some
- 57 He ... computer games every day.
a) play b) playing c) plays d) is playing
- 58 I ... speak Italian.
a) not b) don't c) doesn't d) no
- 59 Do they play football at school? Yes, they ...
a) play b) are playing c) do d) can
- 60 I ... to school.
a) usually walk b) am usually walking c) walk usually d) am walking usually
- 61 They ... late.
a) aren't hardly ever b) hardly are ever
c) ever hardly are d) are hardly ever
- 62 A: What are you doing? B: I ... a book.
a) are reading b) reading c) read d) am reading
- 63 He ... football at the moment.
a) playing b) is playing c) plays d) played
- 64 A: Are they watching TV? B: Yes, they ...
a) are b) do c) watch d) watching
- 65 I ... chess with my father.
a) do b) make c) play d) have
- 66 I ... exercises every day.
a) make b) play c) go d) do
- 67 I ... a shower every morning.
a) have b) make c) do d) go
- 68 I ... the guitar.
a) do b) make c) have d) play
- 69 We ... at a party last Saturday.
a) were b) are c) was d) be
- 70 A: Was he tired? B: Yes, he ...
a) tired b) was c) does d) is
- 71 ... a good film on TV last night?
a) Was b) Were there c) Is it d) Was there
- 72 This is ... bag.
a) Mike b) Mike's c) Mikes' d) Mikes
- 73 Where are the ... fathers?
a) boy's b) boy' c) boys' d) boys
- 74 The black car is ...
a) ours b) our c) ours' d) our's
- 75 That's ... book.
a) mine b) me c) my d) hers
- 76 He's good ... Maths.
a) for b) at c) with d) on
- 77 Are you interested ... music?
a) with b) in c) for d) on
- 78 I go to school ... train.
a) in b) with c) on d) by
- 79 We went ... foot.
a) on b) with c) by d) to
- 80 The cinema is opposite ... the bank.
a) to b) from c) of d) –
- 81 The school is ... the left.
a) on b) at c) in d) by
- 82 They play tennis ...
a) good b) best c) well d) goodly
- 83 He's a ... driver.
a) slow b) slowly c) slowest d) slowed
- 84 It's an ... film.
a) excited b) exciting c) excitedly d) excites
- 85 He's ... boy in our class.
a) taller b) the tallest c) tallest d) tall
- 86 Maria is ... Ann.
a) as intelligent b) the most intelligent
c) more intelligent d) more intelligent than
- 87 A: Where's her book? B: ... is on the table.
a) It b) This c) They d) That
- 88 She can sing ... she can't dance.
a) and b) so c) but d) then
- 89 They ... French last year.
a) don't study b) didn't studied c) didn't study
d) not studied
- 90 A: Did you have breakfast this morning? B: Yes, I ...
a) have b) had c) did have d) did
- 91 I ... John yesterday.
a) see b) saw c) seed d) am seeing
- 92 Maria is eight years old. She ... drive a car.
a) haven't b) can't c) must d) not
- 93 I ... my grandparents next week.
a) go to visit b) am going visit c) go visiting
d) am going to visit
- 94 A: Is she going to sing? B: Yes, she ...
a) goes b) is c) sings d) is going
- 95 It's very ... in April in my country.
a) rainy b) rain c) rains d) rained
- 96 My father is a ...
a) science b) scientific c) scientist d) sciences
- 97 ... are my favourite vegetables.
a) Carrots b) Apples c) Eggs d) Biscuits
- 98 There are two swimming ... in the town.
a) parks b) lakes c) places d) pools
- 99 A: I won a tennis competition yesterday. B: ...
a) Be careful. b) I'm sorry. c) Well done. d) Very well.
- 100 A: Would you like to come to my party? B: Yes, ...
a) I'd love to b) I love it c) I come d) I like

Placement Test Version B

Placement Test B

Choose the correct answer.

- 1 I ... a student.
a) is b) am c) are d) be
- 2 A: Are they students? B: No, they ...
a) not b) isn't c) aren't d) are
- 3 ... Maria your friend?
a) Be b) Are c) Is d) Can
- 4 We ... French.
a) isn't b) not c) no d) aren't
- 5 A: ... is Mrs Smith? B: My English teacher.
a) Who b) Where c) How d) Whom
- 6 A: ... is your brother? B: Sixteen.
a) How old b) When c) What age d) How much
- 7 A: ... are they from? B: London.
a) When b) What c) Who d) Where
- 8 A: ... is your birthday? B: It's today.
a) What b) When c) How old d) What time
- 9 A: Where are ...?
a) their b) them c) us d) they
- 10 You can phone ... this evening.
a) me b) mine c) my d) I
- 11 ... are at school.
a) I b) She c) We d) It
- 12 They're ... friends.
a) she b) hers c) theirs d) her
- 13 The cat likes ... milk.
a) it b) its c) it is d) it's
- 14 The book is ... the table.
a) next b) on c) up d) over
- 15 I watch TV ... the evening.
a) on b) at c) of d) in
- 16 My birthday is ... Saturday.
a) at b) in c) on d) for
- 17 We have a holiday ... August.
a) by b) on c) in d) to
- 18 They are ... France.
a) on b) in c) for d) to
- 19 ... run!
a) Don't b) Not c) Doesn't d) Not to
- 20 ... at John!
a) Look b) Looking c) Looked d) To look
- 21 A: Come here! What are ...? B: They're my socks.
a) this b) that c) those d) these
- 22 Pass me ... book over there, please.
a) this b) those c) that d) these
- 23 Mr Smith is ... old man. He's 99.
a) a b) – c) an d) the
- 24 She's got ... new bicycle.
a) a b) – c) the d) an
- 25 A: Where's Sue? B: In ... kitchen.
a) the b) a c) one d) –
- 26 This is a photo of our two dogs. My dog is ... dog near the tree.
a) one b) – c) a d) the
- 27 Are you from ... United Kingdom?
a) a b) an c) – d) the
- 28 Three ...
a) boy b) boyes c) boys d) bois
- 29 Five ...
a) class b) classes c) classies d) clases
- 30 Two ...
a) childs b) childrens c) children d) child
- 31 He is from ...
a) the Ireland b) Irelands c) Irish d) Ireland
- 32 My friend is ...
a) Italian b) Italy c) Italians d) Italia
- 33 Her wardrobe is in her ...
a) bedroom b) classroom c) kitchen d) garden
- 34 She is ...
a) wide b) weight c) weigh d) fat
- 35 $7 + 7 = \dots$
a) fourteen b) four c) forty d) fourth
- 36 (4th) fourth, (5th) ..., (6th) sixth, (7th) seventh
a) five b) fifth c) fiveth d) fivth
- 37 It's (3.15) ...
a) fifteen past three b) three and quarter
c) quarter past three d) quarter to three
- 38 It's (2.55) ...
a) fifty-five to three b) five to two
c) fifty-five past two d) five to three
- 39 It's (1.30) ...
a) thirty past one b) half past one c) half past two
d) one and thirty
- 40 A: Hi, I'm Sue. What's your name? B: My name's Kate.
A: ...
a) Yes, please. b) Nice to meet you. c) Yes, it is.
d) No, thanks.
- 41 I can't ...
a) swim b) to swim c) swimming d) to swimming
- 42 A: Can you dance? B: Yes, I ...
a) do b) dance c) can d) am
- 43 I like ... tennis.
a) played b) to playing c) playing d) play
- 44 What's ... weather like today?
a) a b) the c) – d) some
- 45 Can you play ... chess?
a) – b) the c) a d) at
- 46 A: ... is your favourite colour? B: Blue.
a) Why b) How c) Where d) What
- 47 A: ... do you play football? B: Never.
a) How much b) How many c) How often d) How
- 48 A: ... pen is this? B: It's John's.
a) Who b) Whose c) What d) Which
- 49 A: ... is it? B: 500 euros.
a) Which b) How often c) How many d) How much
- 50 John ... a motorbike.
a) has got b) have got c) get d) getting
- 51 Our house ... a big garden.
a) hasn't got b) haven't got c) not got d) doesn't got

- 52 A: Are there three cinemas here? B: No, ...
a) they aren't b) there aren't c) it isn't d) there isn't
- 53 ... a park over there.
a) It is b) There are c) There is d) This is
- 54 Are there ... English dictionaries in the cupboard?
a) any b) an c) some d) the
- 55 I haven't got ... pets.
a) the b) some c) no d) any
- 56 ... of my friends are American.
a) Any b) Some c) One d) Lot
- 57 What sports ...?
a) you play b) does you play c) do you play
d) play you
- 58 My father ... in an office.
a) not works b) doesn't work c) not working
d) don't work
- 59 I ... a glass of orange juice every morning.
a) am drinking b) drinking c) drink d) drinks
- 60 Do you ... to the cinema?
a) sometimes go b) go sometimes c) sometimes to go
d) going sometimes
- 61 I ... him.
a) often not phone b) often don't phone
c) don't phone often d) don't often phone
- 62 My sister ... her hair at the moment.
a) washing b) washes c) are washing d) is washing
- 63 A: Are you doing your exercises? B: No, ...
a) I not doing b) I'm not c) I don't d) I'm not doing
- 64 They're happy because ... their favourite DVD.
a) they're watching b) they watch
c) they watches d) they watching
- 65 He can ... a horse.
a) go b) play c) ride d) do
- 66 Can you ... basketball?
a) do b) go c) have d) play
- 67 I ... my homework in the library.
a) do b) have c) make d) can
- 68 He can ... good photos with his new camera.
a) make b) have c) do d) take
- 69 I ... in London last week.
a) was b) were c) be d) am
- 70 We ... at home yesterday.
a) wasn't b) weren't c) not be d) aren't
- 71 A: Were your parents there? B: No, they ...
a) wasn't b) not c) were d) weren't
- 72 This is my ... bike.
a) mother b) mother's c) mothers d) mothers'
- 73 Where are the ... mothers?
a) girl's b) girl' c) girls' d) girls
- 74 The school is near ... house.
a) our b) us c) ours d) our's
- 75 The posters are ...
a) their b) them c) theirs d) their's
- 76 He goes to work ... car.
a) with b) by c) on d) in
- 77 I can't draw. I'm really bad ... drawing.
a) with b) at c) for d) in
- 78 The bank is ... to the cinema.
a) opposite b) past c) across d) next
- 79 What are you interested ...?
a) in b) by c) for d) on
- 80 They play tennis ... weekends.
a) in b) on c) by d) at
- 81 I get ... at 7 o'clock every morning.
a) up b) on c) out d) over
- 82 She sings ...
a) bad b) worst c) badly d) worse
- 83 Lions are ... animals.
a) dangerous b) danger c) dangerously d) dangers
- 84 This book is ...
a) bore b) boring c) bored d) bores
- 85 Tim is ... John.
a) the oldest b) older than c) older as d) older
- 86 He's the ... singer in the school.
a) well b) better c) most good d) best
- 87 My new computer game is great. I love ...
a) it b) this c) them d) him
- 88 She plays tennis ... she does athletics.
a) but b) because c) and d) so
- 89 John ... to school last Monday.
a) walk b) was walking c) walked d) walks
- 90 We ... a newspaper yesterday.
a) not bought b) don't buy c) didn't bought
d) didn't buy
- 91 A: Did you go to the party? B: Yes, I ...
a) go b) did c) went to d) was
- 92 You ... feed the lions at the zoo.
a) must b) mustn't c) can d) do
- 93 They ... have a holiday next year.
a) aren't going b) aren't go to c) don't go to
d) aren't going to
- 94 A: Is he going to buy a CD? B: Yes, he ...
a) going b) is c) buys d) goes
- 95 ... roads are dangerous.
a) lcy b) lce c) lced d) lcity
- 96 He is a good ...
a) build b) building c) builder d) built
- 97 My favourite subject at school is ...
a) science b) scientist c) scientific d) scientifically
- 98 We go bowling at the bowling ... every week.
a) rink b) centre c) park d) alley
- 99 A: Do you want to come to the disco on Friday?
B: Sorry, ...
a) I'm not b) I don't come c) I can't d) I don't want
- 100 A: Let's go to the cinema tonight. B: ...
a) That's a good idea. b) Good luck! c) Well done!
d) We're going.

Answers Sheet of the Placement Test

ANSWER SHEET

Instructions:

1. Choose the correct answer. Only **ONE** answer is correct.
2. Mark your answers on the Answer Sheet. **A, B, C or D.**
3. **DO NOT** write on the exam booklet

Name/ Code
.....

Answers				
Q	A	B	C	D
1				
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5				
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Score				

76				
77				
78				
79				
80				
81				
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				
Score				

Total Score

Total Score	General Level	CEFR Level
0-9	Beginner	A1
10-25	Elementary	A1+ to A2
26-45	Pre-intermediate	A2 + to B1
46-65	Intermediate	B1
66-85	Upper-intermediate	B2
86-100	Advanced	C1

Correction Grid of the Placement

ANSWER SHEET

Instructions:

1. Place this test on the students answers sheet to scores.
2. Write the scores obtained on the students answer sheet
3. Write the obtained **total** on the students answers sheet.
4. Place the students on the **relevant level** according to the total scores obtained.

Name/ Code

Answers				
Q	A	B	C	D
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
Score				

26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
Score				

51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				
Score				

76				
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92				
93				
94				
95				
96				
97				
98				
99				
100				
Score				

Total Score	General Level		CEFR Level	
	0-9	Beginner		A1
10-25	Elementary		A1+ to A2	
26-45	Pre-intermediate		A2 + to B1	
46-65	Intermediate		B1	
66-85	Upper-intermediate		B2	
86-100	Advanced		C1	

Key Answers for Placement Tests Versions A and B

Teacher's Notes

TEST OBJECTIVES

The *Challenges* Placement Test is designed to help you to place students at the correct level of *Challenges: Challenges 1* or *Challenges 2*.

If you have more than one class at the same level, you can use this placement test to divide the classes up into groups of similar levels.

ADMINISTRATION OF THE TEST

It is important to explain the purpose of this test to your students, and to warn them that they might not be able to answer all of the questions.

A 45-minute limit should be given to complete the test. This will ensure a more accurate picture of your students' knowledge. If students are given more time, they may become discouraged or begin to change answers they are not sure of.

There are two versions of the test: A and B. These can be distributed to students sitting next to each other in order to discourage cheating. The two versions test the same items, and in the same order, so that the results can be compared.

Students can either circle answers on the test papers or write on a separate piece of paper which you can then collect and mark. Write the start and finish times on the board.

TEST SCORES

Each test contains 100 Multiple Choice questions.

If students get less than 60% of the answers right, they should use *Challenges 1*.

If they get more than 70% of the answers right, they should use *Challenges 2*.

60–70% of right answers puts students in the middle of the two levels and your decision where to place these students should depend on the level of the rest of the class.

Answer Key

Same answer key for both tests

1	b	51	a
2	c	52	b
3	c	53	c
4	d	54	a
5	a	55	d
6	a	56	b
7	d	57	c
8	b	58	b
9	d	59	c
10	a	60	a
11	c	61	d
12	d	62	d
13	b	63	b
14	b	64	a
15	d	65	c
16	c	66	d
17	c	67	a
18	b	68	d
19	a	69	a
20	a	70	b
21	d	71	d
22	c	72	b
23	c	73	c
24	a	74	a
25	a	75	c
26	d	76	b
27	d	77	b
28	c	78	d
29	b	79	a
30	c	80	d
31	d	81	a
32	a	82	c
33	a	83	a
34	d	84	b
35	a	85	b
36	b	86	d
37	c	87	a
38	d	88	c
39	b	89	c
40	b	90	d
41	a	91	b
42	c	92	b
43	c	93	d
44	b	94	b
45	a	95	a
46	d	96	c
47	c	97	a
48	b	98	d
49	d	99	c
50	a	100	a

Appendix G Sample of Pre test :

Pre-test

Write a paragraph about the effects of COVID-19 on education.

..... Covid 19 is a death disease which appeared in 2019, and it influenced about many fields. To start with education. Education is the most field which covid 19 influenced for it, for example; we had a short time to study and a lot of lessons which make students did not understand and fails in the tests. Secondly, In this periode we strided by strict laws like: masks, distance of security. In conclusion, the periode of covid 19 influenced a lot on education, it was a difficult periode, but, we was put hand in hand we avoid this dangers.

Appendix H: Sample of Progress test

Ministère de l'Enseignement Supérieur
et de la Recherche Scientifique
UNIVERSITE Sétif 2

Faculté des Lettres et des Langues

COPIE D'EXAMEN

Département :				
Nom et Prénom :				
N° d'Inscription :				
Année d'étude :	2 nd	Section :	B	Groupe :	1
Module :	Written expression				
Session :	Written expression Quiz				
Date d'examen :	Sunday, April 30 th , 2023				

Note

6/11

Does the integration of technology in classroom session help to improve the learning process?

- Type of text = argumentative ✓

The integration of technology in classroom session help to improve the learning process, and the most Universities around world start to use this method, it seems complicated because it need money, maybe not effective, but in reality not. Applying technology in learning process helps a lot, it's allow a platform for students to discuss their lessons or topics inside the classroom calmly and build a construction dialogue with each others which make the learning process easier. Because of the intelligence of technology a lot of mistakes have been avoided furthermore it's helps to solve different issues and problems so fast, so students can do their works without time wasting. Technology allows a higher options for learning process for example it gives a many answers for a question.

and support it with a real images, pictures, etc.
Technology considered as a comfort way specially in
learning process because this one need time, effort and
a lot of thinking which make this process more complex
and difficult for this there is no way to get ride of all
this problems without technology.

organization (cohesion and coherence) = 1.5/2

Grammar and sentence structure = 0.5/2

Mechanics and format = 1/2

vocabulary = 0.5/2

development of ideas and structure = 1.5/2

Appendix I. Sample of Post test

Mohammed Latifou Debaghine Benli-Z- University
Faculty of Arts and Languages
Department of English Language and Literature
Second Year Classes 20th of May 2023

Academic year: 2022/2023
Name: [Redacted]
Group: 2 B 1
Mark: 18.5 / 20

SECOND TERM WRITING EXAM

Task one Read the paragraph below then write a strong topic sentence, a final supporting detail and a good concluding sentence

Exercise have many benefits, and people should exercise for certain reasons. First, your body will look better, for exercise is perfect for staying trim and healthy-looking. Second, you will actually have more energy. A person who exercises will have fewer problems walking up stairs or climbing hills. In addition, your heart will be healthier as regular physical activity strengthens its muscles and consequently its ability to pump blood. Furthermore, a person who exercises regularly won't suffer from obesity and dangerous diseases like heart disease. To conclude, exercising is the secret of leading a happy and a healthy life that every one wants to.

Task two Write a paragraph about ONE of the following topics. DO NOT BY ANY MEANS EXCEED THE DOTTED LINES.

- What are the differences between classroom lessons and other sources' lessons like the internet and television?
- People who travel to another country for a long period often suffer badly from homesickness. What do you think are the causes of homesickness?
(Homesick: unhappy because of being away from home for a long period)
- Do you agree with the view that online communication does not promote the same levels of satisfaction for people as the traditional face-to-face communication?
- Narrate a story about a disagreement you had with a friend or family member, and how did it end?

Today students study from different resources, like the traditional way from classrooms or from internet and television and between these two ways there are differences. First, in credibility of knowledge, students who attend classrooms lessons are sure that the information that they gain are true. Unlike studying from internet, the information may not be valid for the sites provide wrong ones. In addition, classroom sessions are well organized and student won't waste time. In contrast, online studies are not organized and students can study whenever they want. Second, students understand and can ask questions about the lesson in classrooms. However, when they study from internet or television they have difficulties to understand and they can't ask questions about the lesson. Third, students may get bored when they study in classrooms, or they don't like the teacher. Unlike studying from internet they won't be bored and they can change the teacher if they didn't like him. To conclude, the differences between classroom lessons and other internet lessons are big, and the student himself choose which way he likes to study in.

Appendix G Sample of Paragraph Worksheet of Treatment Session

NAME: _____

SESSION: 4

The sport of football has witnessed a dramatic changes in the past 40 years since it originally emerged in 1802.

When the first match ever that officially took place, a few essential rules were written (6 overall) in contrary to now, there are 18 main rules. Despite the fact that it always has been two teams facing each other, the number of players differ from them, as it was 8 players in a team, however now it's 11 in one side. Back then the referee had to exhaust himself to cover the pitch, but now there are 2 referees helping plus the (VAR). Speaking of (VAR) a technological assist that helps spotting faults whereas back then the refs had to rely on their eyes and their perceptions only.

Support (content) Relevance to the topic Adequacy	Grammar	Vocabulary	Spelling	Punctuation Capitalization
<p>it always has been it has always been</p>	<p>differ → differs helps spotting → helps spot</p>	<p>Refs → referees the refs → themselves</p>	<p>whereas → whereas witnessed → witnessed essential → essential technologique → technological officially → officially in contrary → contrary Referee → referee</p>	<p>(6 overall) in contrary - no comma after the marked back then the refs no comma after them</p>

NAME: ██████████

SESSION: 1

Last summer holiday, i went with my family to the new Amusement park in the city. We had a lot of fun there. There are many entertaining places, which make it the best place ever.

- Games and entertainment places for kids and adults.
- Large green space for parents and old people.
- Food stands.

Support (content) Relevance to the topic Adequacy	Grammar	Vocabulary	Spelling	Punctuation Capitalization
	<p>i went... => This should be written in uppercase = I</p>		<p>effere = offer.</p>	<p>such as = flat ... : a colon must be preceded by an independent clause tea and : series of items must be separated with comma coffee, tea, and ... include : include as follows : soda ...</p>

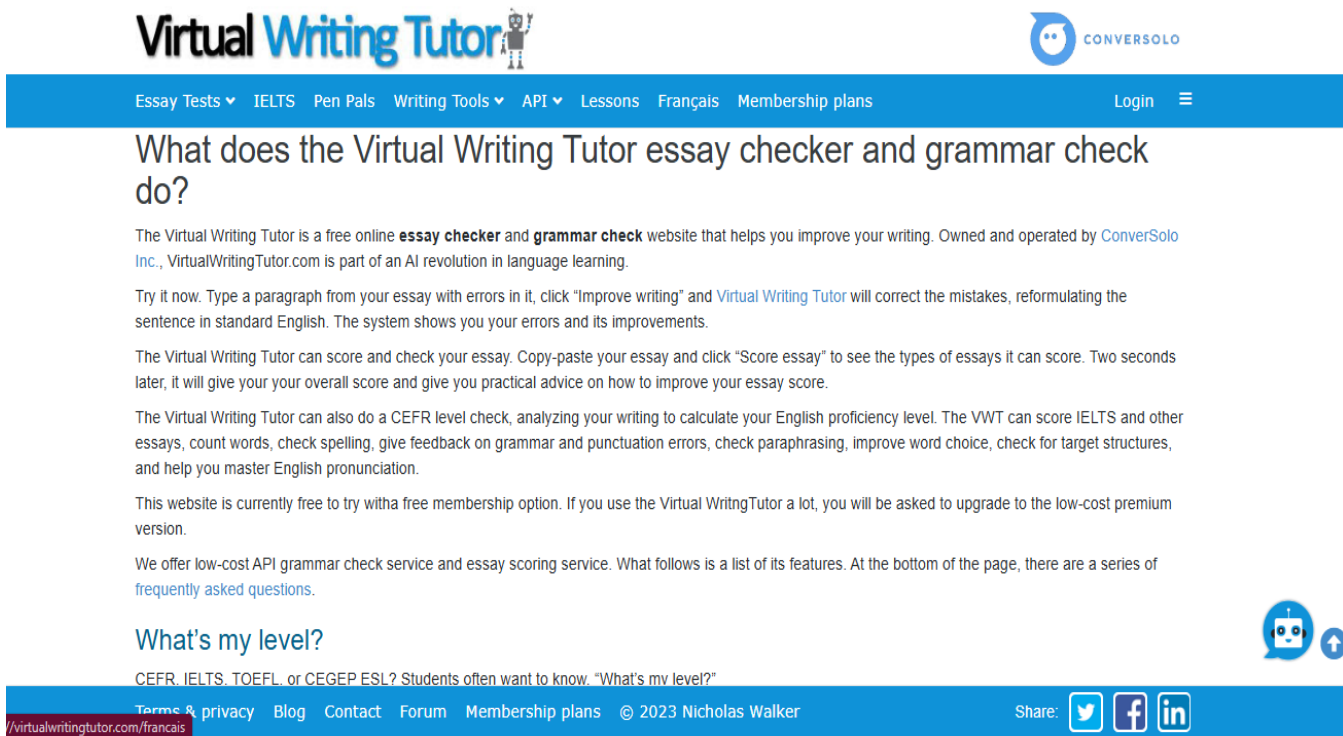
The backside of the same paper:

Last summer, my family and I went to the new amusement park in the city. We had a lot of fun there. There were many entertaining places, making it the best place ever. First, there were many games for kids to enjoy their time comfortably, such as flat rides, roller coasters, railways and other games that help kids feel free and happy, getting them out of depression and also from video games.

Second, there was a large green space for parents and older people, so they could sit near the park and watch their children while enjoying the natural views.

In addition to all of this, there were food stands that served a variety of food and beverages. They offered snacks like cotton candy, ice cream, french fries and candy apples. Meal items included pizza, hamburgers, hot dogs, and chicken. Beverages included soda, coffee, tea, and lemonade.

Appendix K. Extracted Information About the Virtual Website



The screenshot shows the Virtual Writing Tutor website. The header includes the logo and navigation links: Essay Tests, IELTS, Pen Pals, Writing Tools, API, Lessons, Français, Membership plans, and a Login button. The main heading is "What does the Virtual Writing Tutor essay checker and grammar check do?". The content describes the website as a free online essay checker and grammar check tool, owned by ConverseSolo Inc. It details how users can improve their writing by typing paragraphs with errors, which the system corrects. It also mentions that the tool can score essays, check CEFR levels, and provide feedback on grammar, spelling, and pronunciation. A footer contains terms and privacy links, a blog, contact, forum, and membership plans, along with a copyright notice for 2023 Nicholas Walker and social media share buttons for Twitter, Facebook, and LinkedIn.

What does the Virtual Writing Tutor essay checker and grammar check do?

The Virtual Writing Tutor is a free online **essay checker** and **grammar check** website that helps you improve your writing. Owned and operated by ConverseSolo Inc., VirtualWritingTutor.com is part of an AI revolution in language learning.

Try it now. Type a paragraph from your essay with errors in it, click "Improve writing" and Virtual Writing Tutor will correct the mistakes, reformulating the sentence in standard English. The system shows you your errors and its improvements.

The Virtual Writing Tutor can score and check your essay. Copy-paste your essay and click "Score essay" to see the types of essays it can score. Two seconds later, it will give you your overall score and give you practical advice on how to improve your essay score.

The Virtual Writing Tutor can also do a CEFR level check, analyzing your writing to calculate your English proficiency level. The VWT can score IELTS and other essays, count words, check spelling, give feedback on grammar and punctuation errors, check paraphrasing, improve word choice, check for target structures, and help you master English pronunciation.

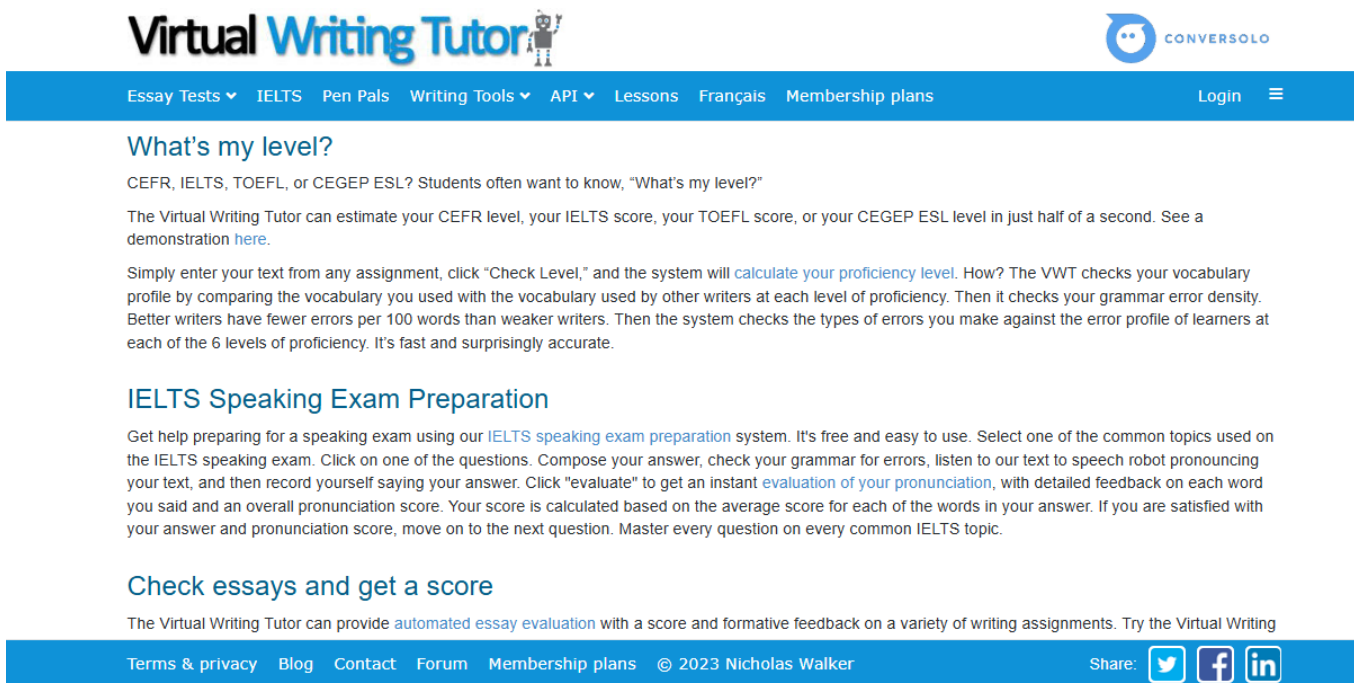
This website is currently free to try with a free membership option. If you use the Virtual WritingTutor a lot, you will be asked to upgrade to the low-cost premium version.

We offer low-cost API grammar check service and essay scoring service. What follows is a list of its features. At the bottom of the page, there are a series of frequently asked questions.

What's my level?

CEFR, IELTS, TOEFL, or CEGEP ESL? Students often want to know, "What's my level?"

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The screenshot shows the "What's my level?" page on the Virtual Writing Tutor website. The header is identical to the previous page. The main heading is "What's my level?". The content explains that the tool can estimate CEFR, IELTS, TOEFL, or CEGEP ESL levels in half a second. It describes how users can input text to have their proficiency level calculated by comparing their vocabulary to other writers at each level. The page also features a section for "IELTS Speaking Exam Preparation" and a "Check essays and get a score" section. The footer is the same as the previous page.

What's my level?

CEFR, IELTS, TOEFL, or CEGEP ESL? Students often want to know, "What's my level?"

The Virtual Writing Tutor can estimate your CEFR level, your IELTS score, your TOEFL score, or your CEGEP ESL level in just half of a second. See a demonstration [here](#).

Simply enter your text from any assignment, click "Check Level," and the system will [calculate your proficiency level](#). How? The VWT checks your vocabulary profile by comparing the vocabulary you used with the vocabulary used by other writers at each level of proficiency. Then it checks your grammar error density. Better writers have fewer errors per 100 words than weaker writers. Then the system checks the types of errors you make against the error profile of learners at each of the 6 levels of proficiency. It's fast and surprisingly accurate.

IELTS Speaking Exam Preparation

Get help preparing for a speaking exam using our [IELTS speaking exam preparation](#) system. It's free and easy to use. Select one of the common topics used on the IELTS speaking exam. Click on one of the questions. Compose your answer, check your grammar for errors, listen to our text to speech robot pronouncing your text, and then record yourself saying your answer. Click "evaluate" to get an instant [evaluation of your pronunciation](#), with detailed feedback on each word you said and an overall pronunciation score. Your score is calculated based on the average score for each of the words in your answer. If you are satisfied with your answer and pronunciation score, move on to the next question. Master every question on every common IELTS topic.

Check essays and get a score

The Virtual Writing Tutor can provide [automated essay evaluation](#) with a score and formative feedback on a variety of writing assignments. Try the Virtual Writing

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Check essays and get a score

The Virtual Writing Tutor can provide [automated essay evaluation](#) with a score and formative feedback on a variety of writing assignments. Try the Virtual Writing Tutor's essay checker scoring system. This website is an opinion essay checker, film-analysis essay checker, argument essay checker, cover letter checker, IELTS essay checker, and self-scoring [pen pal exchange system](#).

Researchers have found that the Virtual Writing Tutor accelerates learning by 44%, showing an impressive effect size (Cohen's $d = 0.88$). [Read about it here](#): "The Impact of Virtual Writing Tutor on Writing Skills and Attitudes," in the *Journal of Education and Development*.

Students love it. At a college in Montreal, students got formative feedback on their film-analysis essays and reported that they enjoyed getting a score and feedback in just two seconds instead of having to wait two weeks. [Dr. Frank Bonkowski](#) reported that using the VWT helped to reduce his workload. [Try it for yourself](#). Here is part of a video on YouTube to explain why automated essay scoring is so [important in ESL](#).

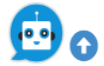
Essay checker

If you write essays in your second language for high school or college, check your essay for embarrassing errors that a teacher would deduct points for. For the best results, we strongly recommend a two-pronged approach: find your errors using this [Virtual Writing Tutor grammar checker](#) first; then, use the "Improve writing" button to rewrite your sentences in standard English.

For students preparing for the IELTS exam, get the practice you need here with our [IELTS essay checker](#) and IELTS speaking exam preparation.

IELTS Academic Writing Practice Tests

The Virtual Writing Tutor calculates your band score on [Task 1](#) and [Task 2](#) writing tests automatically. There are a variety of timed writing tests for you to choose from. Select either a [Task 1](#) or [Task 2](#) essay writing prompt, start the timer, and write. When you finish, the Virtual Writing Tutor will use its breakthrough form of



Grammar Check

To check your grammar, click on the **Check Grammar** button. The system will check for common punctuation errors, common grammar mistakes and ESL grammar errors, false cognates, contextual spelling errors, and word choice errors. The results of the grammar-check are listed below the text area. You must scroll down to see the suggested corrections. The reason for putting correction advice down below is simple. When learners scroll down to read the correction advice and then scroll up to make the correction, I believe that there is a better chance that they will remember the correction in the future.

The Virtual Writing Tutor's grammar and punctuation checker feature is powered by a modified [LanguageTool](#) system. The difference between these two systems is that the Virtual Writing Tutor grammar checker has thousands of additional error detection rules to catch common ESL grammar errors.

Some examples of common ESL errors that the Virtual Writing Tutor grammar checker can catch are as follows: tense shift errors, missing auxiliaries, adverb word order errors, aspect errors, collocation errors, articles with plural nouns, adjective word order errors, double subjects, double objects, double negatives, mixed conditionals, gerund error, h-e-penthesis errors, pronoun antecedent agreement errors, quantifier errors, verb agreement, and adjective agreement errors.

Paragraph Checker

The Virtual Writing Tutor can quickly find errors in your paragraphs. It can help you with punctuation, spelling capitalizations errors, and word choice errors. Check your paragraph with the Virtual Writing Tutor before you submit your text to your teacher.



Vocabulary Checker

Vocabulary Checker

To check your vocabulary, click on the **Vocabulary Checker** button. The Virtual Writing Tutor will analyze your vocabulary using a range of vocabulary checker tools. Use the feedback to increase the sophistication of your word choice, to increase the number of words related to your field of study, or to eliminate clichés.

Academic and general vocabulary profile → The Virtual Writing Tutor vocabulary checker will profile the vocabulary in any piece of writing to tell you how common your word choice is and how much academic vocabulary you have used. Aim to use less common and academic vocabulary for your school work and IELTS essays. Learn more about [academic versus conversational vocabulary](#).

Cliches and power words → Bloggers will find it useful to check for expressions that have lost their original impact because of overuse (cliches) and to count the types of words that elicit powerful emotional reactions in readers (power words). Eliminate clichés; they're boring. Include power words; they're engaging.

Field-related vocabulary → If you are learning English for professional or academic purposes, knowing what field-related vocabulary you have in your essay will let you know whether your writing is field-related or not. The system checks to see which words in your text are related to the 47 fields of study on [FieldRelated.com](#). The system will display the best three matches. Each match is shown with a link to additional field-related readings, listenings, and glossaries to help you extend your field-related learning.

For alternatives to the Virtual Writing Tutor vocabulary checker, try [Longman Vocabulary Checker](#) and [Lextutor.ca Vocabulary Profiler](#).



Frequently Asked Questions

Frequently Asked Questions

What is the best grammar checker?

The [Virtual Writing Tutor](#) is the best grammar check website for many reasons.

1. The Virtual Writing Tutor can find errors that other systems can't detect. I have spent years analyzing and correcting real errors written by real students.
2. The Virtual Writing Tutor reports your errors below the text, forcing you to remember the feedback and correction for a few seconds. Remembering a correction is a positive step toward eliminating it forever.
3. The Virtual Writing Tutor can detect run-on sentences, comma-splices, and dangling participles--among other problems.
4. The Virtual Writing Tutor's grammar check is always 100% free. If you want to try our other services, it is inexpensive to upgrade.

How can I embed a free grammar checker into a webpage or blog post?

You can get the iframe code to embed the Virtual Writing Tutor grammar checker into your webpage, Moodle course, or blog with this [grammar checker iframe code](#). The iframe is set to expand to 90% width of the page or frame you put it in. I have written a blog post all about adding the Virtual Writing Tutor to your web page or blog here: [Create your own ESL grammar checker website for your students with an iframe](#)



What is the purpose of the Virtual Writing Tutor grammar checker?

What is the purpose of the Virtual Writing Tutor grammar checker?

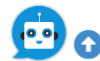
The primary goal of this grammar checker is to enhance ESL pedagogy. English [teachers](#) are a limited resource. They are available only to their own students, only during the course, only during the day, and are typically only available for one-on-one instruction for a few minutes at a time. A free online grammar checker website can enhance pedagogy by filling in when [teachers](#) are not available. A free, automated grammar checker can assist learners by being available to everyone, student or professional, night or day, and by providing tireless assistance with tedious proofreading tasks.

Why should language teachers use the Virtual Writing Tutor grammar checker in their courses?

Students are usually loath to do any writing unless it either "counts" or they get extensive feedback that will prepare them for an assignment that will count. Teachers therefore feel obliged to copy-edit every assignment students hand in. However, spending just 5 minutes a week on each student's assignment adds twelve hours and 30 minutes each week of corrective feedback to the workload of a teacher with 150 students. Many [teachers](#) will therefore limit the number of writing assignments they give students because of the impact corrections have on their workload as a teacher.

By automating part of the corrective feedback that students receive with the Virtual Writing Tutor, teachers can ensure students get extensive feedback on every assignment. Confident that students' errors won't be ignored, [teachers](#) can assign more writing tasks to students without increasing their workload.

Making the correction load more manageable is one benefit for [teachers](#), but there are benefits for students, also. There are at least 5 clear benefits that I can see:



1. students get a greater amount of consistent, explicit, just-in-time corrective feedback on surface errors from a grammar checker than they would otherwise
2. students learn to become more autonomous when using a grammar checker
3. grammar checkers teach students to become judicious users of technology, engaging their critical thinking skills, especially when they receive bad feedback or false alarms
4. grammar checkers provide students with lifelong learning opportunities
5. grammar checkers can provide feedback on multiple drafts of an assignment, instead of typically just one or two drafts

How should teachers incorporate a grammar checker website into their ESL course?

In order to use a grammar checker effectively in an ESL course, [teachers](#) must, in my opinion, do two things: 1) create a routine in which students are required to use the grammar checker every week, and 2) set a standard of *zero avoidable errors*. To ensure students stick to the routine, [teachers](#) can assign a writing task at the end of each lesson and deduct points if the text contains avoidable errors

What are avoidable errors? Avoidable errors are those particular errors students can correct for themselves because they have received form-focused instruction or because a free grammar checker like the Virtual Writing Tutor can detect them and suggest corrections. In other words, a student who submits a text that contains errors in grammar that was thoroughly taught in a previous lesson or contains errors that can be eliminated by using the Virtual Writing Tutor grammar checker is a student who has not met expectations. Submitting texts containing avoidable errors to a teacher indicates a lack of learning or care, and should be scored lower than texts without avoidable errors.

In two of the courses I teach, my students must submit 12 texts over 15 weeks. The first 11 of those texts must be checked with the Virtual Writing Tutor grammar checker and have all avoidable errors eliminated. Each text is scored using a simple rubric. It must be 100-200 words in length, contain the target structures from the lesson, and have all avoidable errors eliminated using the Virtual Writing Tutor. If a text is submitted with avoidable errors, the student loses 1/3. The other 2/3 comes from using target structures taught in class (1/3) and from submitting a well-developed text (1/3). The only exception to my rule about using the Virtual Writing Tutor is with the final exam. On the final, students do not get access to the VWT because I expect that they have learned to eliminate their most common



Appendix L. An Example of a Student's Paragraph Analyzed by Virtual Writing Tutor

Students's general level:

Virtual Writing Tutor CONVERSOLO

Essay Tests ▾ IELTS Pen Pals Writing Tools ▾ API ▾ Lessons Français Membership plans Login ☰

Check grammar, punctuation, spelling, paraphrasing, and vocabulary, or outline essays and write hypertext narratives.

Improve Writing Check Grammar Detect GPT Check Level Check Score Writing Advice Check Topic Sentence Word Count

Check Punctuation Check Essay Check Writing Check Target Structures Rubrics Check Vocabulary Check Paraphrase Check Cohesion

Dictionary Print

In the university I face some problems for instense: mension. I don't underatand the profs. However, my first decision on the life is contine my study and work out ; for example, I will ending my study soon in order to wori for help my fother in the begining and enquire my dreams to gether. Aber I am a person very hardline, warm-blooded and not vert social. I am good heart and very a large minded, too.

Example #1 Example #2 Examples for "Score Essay" ▾ ABC 🔊 📄 📄

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Virtual Writing Tutor CONVERSOLO

Essay Tests ▾ IELTS Pen Pals Writing Tools ▾ API ▾ Lessons Français Membership plans Login ☰

Click to hear the result!

A1
CEGEP 001
IELTS 2.0-3.0
TOEFL <30

Level Check

Category	Value
Vocabulary	3.0
Error density	1.0
Error profile	3.0

VOCABULARY BY CEFR LEVEL

A1 WORDS: university, problem, first, life, work, help, begin, person, very, warm, good, very, too

A2 WORDS: however, end, soon, order, dream, heart, large



B1 WORDS: face, decision, study, study, not, out

B2 WORDS:


C1 WORDS:

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Grammar and mechanics errors feedback :

Virtual Writing Tutor   CONVERSOLO




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 [Click to hear the text](#)

Error profile

Word count: 78
Paragraph count: 1
Error count: 20
Error density: 26%

1. You wrote: in the university I face some problems for...
Feedback: The usual preposition for "university" is "at." Revise: "at the university".
Error type: Preposition choice error
Suggestion: At the university
2. You wrote: In the university, I face some problems for instense: mens...
Feedback: Put a comma after your introductory phrase, like this: "In the university, I face". (co02)
Error type: Punctuation errors
Suggestion: In the university, I face
3. You wrote: ...the university I face some problems for instense: mension, I don't underatand the profs....
Feedback: Possible spelling mistake found
Error type: Possible Typo
Suggestion: intense, ins tense




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Suggestion: will end

9. You wrote: ...I will ending my study soon in order to woj for help my fother in the begining and ...
Feedback: Possible spelling mistake found
Error type: Possible Typo
Suggestion: work, word, wore, worn, worm, wort, WORM
10. You wrote: ...I ending my study soon in order to for help my fother in the begining and enqu...
Feedback: We do not put "for" before the base form of a verb.
Error type: Infinitive error
Suggestion: to help, for helping
11. You wrote: ...ding my study soon in order to help my fother in the begining and enquire m...
Feedback: You have used a bare infinitive "help" after "for." Use a present participle or use "to" like this, "for helping" or "to help."
Error type: Infinitive error
Suggestion: for helping, to help
12. You wrote: ...study soon in order to woj for help my fother in the begining and enquire my dreams t...
Feedback: Possible spelling mistake found
Error type: Possible Typo
Suggestion: other, father, mother, Father, bother, pother, f other
13. You wrote: ...order to woj for help my fother in the begining and enquire my dreams to gether. Aber ...
Feedback: You have a spelling error. You wrote "begining," but you should have spelled it "beginning". There is a spelling rule you should know about. When the second syllable of a two-syllable word is stressed, double the final consonant before adding the suffix (-ing).
Error type: Contextual spelling errors
Suggestion: beginning

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Topic sentence feedback

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Sentence 2 Weak Moderate Strong +




0.70

However, my first decision on the life is contine my study and work out ; for example, I will ending my study soon in order to worj for help my fother in the begining and enquire my dreams to gether .


Sentence 3 Weak Moderate Strong +

0.00

Aber I am a person very hardline, warm-blooded and not vert social, I am good heart and very a large minded, too.

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Feedback:For strong thesis and topic sentences, make sure your sentences have the following qualities:

- Brevity:** keep them short. Elaborate later.
- Cohesion:** show how the sentence is related to the rest of the essay with words like "in short," "first, second," or "in conclusion."
- Action:** use action verbs like "affirm," "contend," "posit," or "provide" in place of stative verbs like "is" or "have" or perception verbs like "seem."
- Sentiment:** use words that are negative or positive in polarity like the nouns "benefit" or "harm" or verbs like "to improve" or "to destroy."
- Precision:** avoid vague words like "good" or "bad." Use numbers to quantify how many reasons you can provide.
- Force:** use modals with attitude like "should," "must," or "have to." Avoid downtoners like "somewhat," "sort of" or "to some extent." And demand big change in society instead of asking for small improvements like "greater awareness."
- Argumentation:** use vocabulary related to argumentation, "like conclude," "implication," or "it makes sense."
- Urgency:** use words that communicate that action is needed now, like "immediately," "instantly," "promptly," "forthwith," or "without delay."
- Otherness:** make your argument about something other than yourself, avoiding self-referencing phrases like I'm going to talk about...
- Declaration:** never use exclamation marks (!) or question marks (?) because they make you sound either emotional or confused.

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Cohesion feedback:



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Cohesion Word Profile

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Coordinating Conjunctions



2

and, for

Subordinating Conjunctions

0

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Transitions Indicating a Comparison

1

too




Transitions Indicating Causes and Effects

0

Transitions Indicating a Sequence

1

first

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Transitions for Summarizing and Concluding

0

Transitions Indicating a Concession

0

Transitions for Elaborating

0

Cohesion Density: 7%

Feedback: Use [transition words](#) in your writing to show the relationship of the ideas to each other.

Virtual Writing Tutor

Grammar check | Essay checker | Writing checker

February 4, 2019

Transitions for Better Cohesion

by [Nicholas Walker](#), under [IELTS](#) and [TOEFL](#), [Writing skills](#)

Cohesion is what helps your reader understand the connection between your ideas. Transitions and conjunctions are the words and phrases that build cohesion.

Here is a [list of cohesion-building words](#).

I have designed the Virtual Writing Tutor's [Cohesion Checker](#) to measure the cohesion in your text by looking for transitions and conjunctions. When the system detects cohesion in your text, it displays a bar graph showing you what categories of transition words and conjunctions you have used.

Cohesion Word Profile

Coordinating Conjunctions



A list of cohesion building words provided in a separate page of the website :



[traveler or a voice-enabled chatbot](#)

[Inflation for ESL students](#)

[Improve Writing](#)

[What's my English level?](#)

An example of the feedback from the cohesion checker

If you don't use cohesion words in your text, you have a problem. Your writing will seem choppy and disconnected to your reader. On the other extreme, it is also possible to use too many cohesion words, which your reader will find awkward and distracting.

Cohesion Words

COORDINATING CONJUNCTIONS

- | | |
|-------|-------|
| - and | - or |
| - but | - so |
| - for | - yet |
| - nor | |

SUBORDINATING CONJUNCTIONS

- | | |
|-------------|-----------|
| - as | - since |
| - as if | - so that |
| - as though | - than |

- following this
- further
- so too
- what's more



TRANSITIONS FOR INTRODUCING EXAMPLES

- a case in point
- an analogy
- another way
- as an example
- as an illustration
- consider
- consider as an illustration
- for example
- for instance
- for one thing
- in another case
- in one example
- in order to clarify
- in particular
- in the following manner
- in this case
- in this situation
- in this specific instance
- more exactly
- namely
- on this occasion
- specifically
- such as
- suppose that
- take the case of
- that is
- to be exact
- to bring to light
- to clarify
- to demonstrate
- to exemplify
- to explain
- to illuminate
- to illustrate
- to put another way
- to show


TRANSITIONS FOR EMPHASIS AND INTENSIFICATION

- above all
- actually
- most of all
- of great concern

A step by step advice on how to improve writing, comparing original work with the improved one:

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Improve Writing




Your text: In the university I face some problems for instense: mension. I don't under~~at~~and the profs. However, my first decision on the life is contine my study and work out ; for exmple, I will ending my study soon in order to worj for help my fother in the begining and enquire my dreams to gether . Aber I am a person very hardline, warm-blooded and not verj sociol, I am good heart and very a large minded, too.

Feedback: In university, I face some problems, for instance, I struggle to understand my professors. Despite this, my first decision in life is to contine my studies and work hard. For exmple, I will soon finish my studies in order to work and support my father, and also pursue my dreams. Although I am a determined and passionate person, I am not very sociable. However, I have a kind heart and a broad mind.

Your text was 73% improved.

Step-by-step advice:

1. Use proper punctuation: In the first sentence, use a comma after "university" and "for instance" to separate the introductory phrase. In the second sentence, use a comma after "together" to separate the restrictive idea.

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Share:   

Your text was 73% improved.

Step-by-step advice:

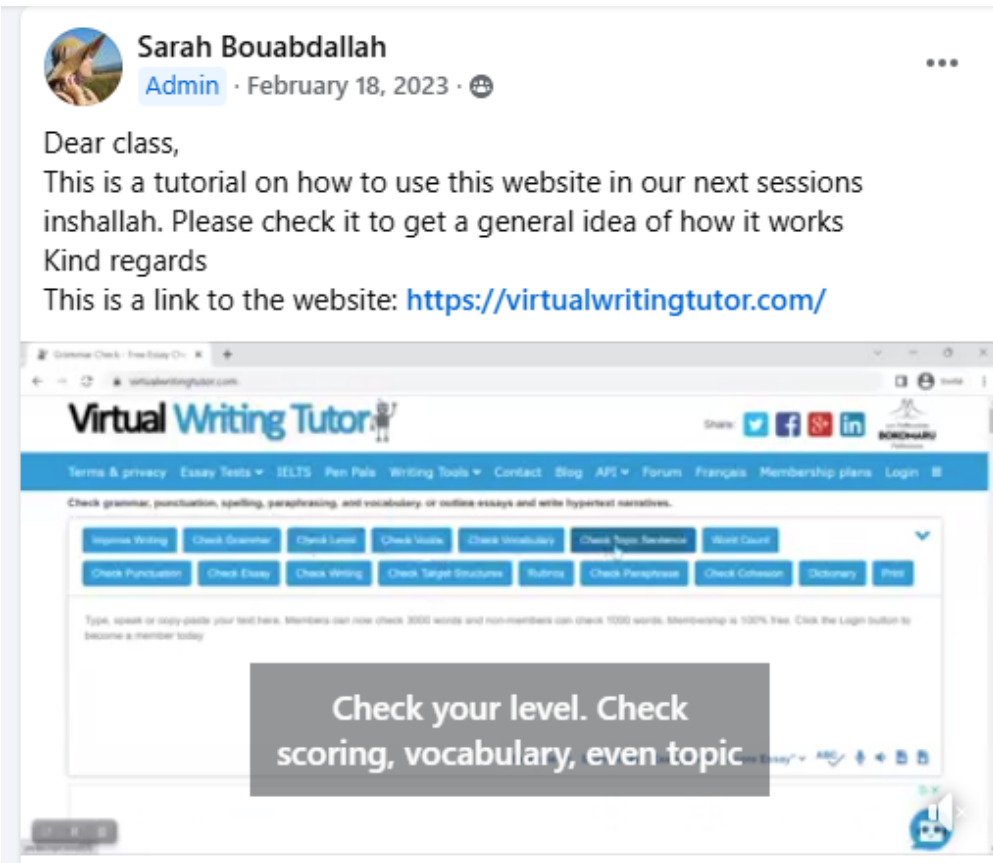
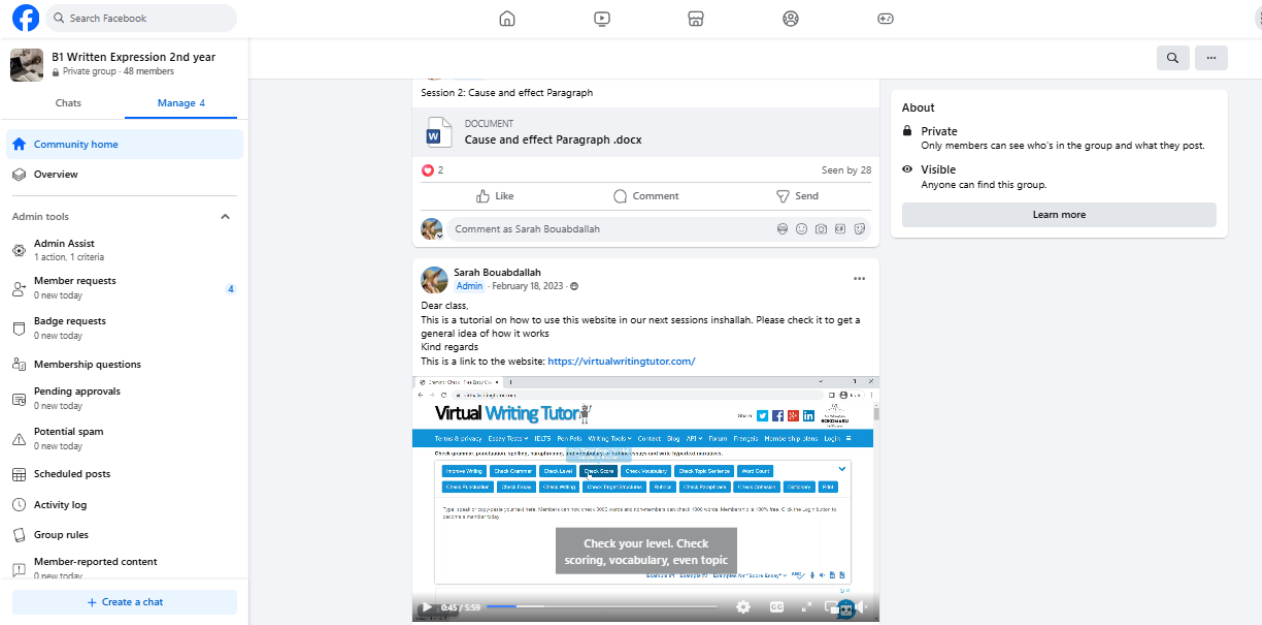
1. Use proper punctuation: In the first sentence, use a comma after "university" and "for instance" to separate the introductory phrase. In the second sentence, use a comma after "However" to separate the contrasting idea.
2. Use correct spelling and grammar: "instense" should be spelled as "instance" and "underatand" should be spelled as "understand." In the third sentence, "contine" should be "continue" and "worj" should be "work." In the fourth sentence, "exomple" should be "example" and "ending" should be "end." In the fifth sentence, "worj" should be "work" and "fother" should be "father." In the sixth sentence, "enquire" should be "pursue" and "gether" should be "together." In the last sentence, "hardline" should be "determined" and "vert" should be "very."
3. Use appropriate vocabulary: Instead of "professors," use "profs" or "teachers" for a more casual tone. Instead of "decision on the life," use "decision in life." Instead of "work out," use "work hard" or "put in effort." Instead of "ending," use "finish." Instead of "worj," use "work." Instead of "help my fother," use "support my father." Instead of "enquire," use "pursue." Instead of "gether," use "together." Instead of "hardline," use "determined" or "resilient." Instead of "vert," use "very."
4. Use proper sentence structure: In the first sentence, "for instense" should be "for instance" and "mension" should be "mention." In the second sentence, "contine" should be "continue" and "life" should be "studies." In the fourth sentence, "exomple" should be "example" and "ending" should be "finish." In the fifth sentence, "worj" should be "work" and "fother" should be "father." In the sixth sentence, "enquire" should be "pursue" and "gether" should be "together." In the last sentence, "hardline" should be "determined" and "vert" should be "very."
5. Use parallel structure: In the third sentence, "contine my study and work out" should be "continue my studies and work hard." In the fourth sentence, "ending my study soon" should be "finishing my studies soon." In the fifth sentence, "worj for help my fother" should be "work to support my father." In the sixth sentence, "enquire my dreams to gether" should be "pursue my dreams together."



5. Use parallel structure: In the third sentence, "contine my study and work out" should be "continue my studies and work hard." In the fourth sentence, "ending my study soon" should be "finishing my studies soon." In the fifth sentence, "worj for help my fother" should be "work to support my father." In the sixth sentence, "enquire my dreams to gether" should be "pursue my dreams together."
6. Use appropriate adjectives: Instead of "warm-blooded," use "passionate" or "enthusiastic." Instead of "not vert social," use "not very sociable." Instead of "good heart," use "kind heart." Instead of "very a large minded," use "broad-minded."
7. Use proper capitalization: "Aber" should be "But" and "I" should be capitalized in the beginning of each sentence.
8. Use proper verb tense: In the third sentence, "will ending" should be "will finish" and "worj" should be "work." In the fourth sentence, "enquire" should be "pursue" and "gether" should be "together."
9. Use proper word order: In the fifth sentence, "worj for help my fother" should be "work to support my father."
10. Use proper conjunctions: Instead of "for exomple," use "for example." Instead of "and enquire," use "and pursue."
11. Use proper prepositions: Instead of "to gether," use "together."
12. Use proper capitalization: "Aber" should be "But" and "I" should be capitalized in the beginning of each sentence.
13. Use proper verb tense: In the third sentence, "will ending" should be "will finish" and "worj" should be "work." In the fourth sentence, "enquire" should be



Appendix M. A Self-Designed Tutorial Video on How To Use VWT That is Shared on the Facebook Group Page



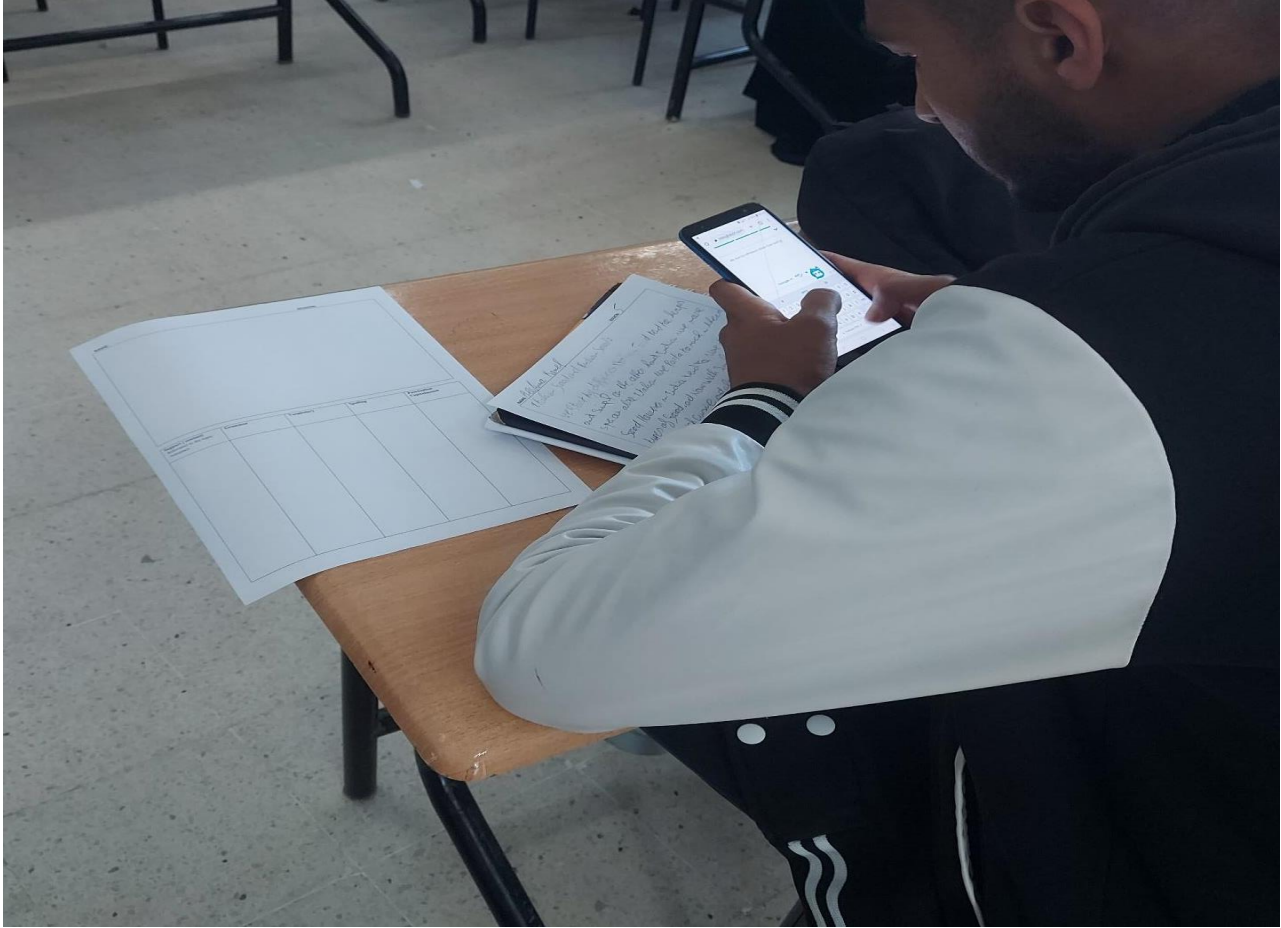
Appendix N. Students Use of Virtual Writing Tutor in the Treatment Phase

Workshop Session



Classroom sessions





Appendix O. References for Student's Post Treatment Questionnaire

No	Section	Statements	References
1	Perceived trust Perceived ease of use	I think I can rely on AWE to identify my writing mistakes.	Zhai & Xiaomei (2021)
2		I think that the AWE feedback on my writing is fair.	
3		I trust that AWE keeps my personal information safe.	
4		Overall, I think that AWE feedback is trustworthy	
5		The AWE feedback was clear and understandable.	
6		The AWE feedback was relevant to my writing problems	
7		AWE offers flexibility in writing as to time and place.	
8		The AWE feedback enhanced my writing by immediately providing me the corrections and suggestions.	
9		I find AWE easy to use.	
10		AWE feedback helps me feel more independent in my writing process.	Wang et al. (2012)
11		AWE allows me to self-correct my mistakes without relying on others	

12	Autonomy	I feel more confident writing on my own after using AWE feedback.		
13	Perceived Usefulness	AWE feedback teaches me how to use correct grammar structures in my writing.	Ariyanto et al. (2021),	
14		AWE feedback improves my spelling and punctuation accuracy.		
15		AWE suggestions make my sentences clearer by offering better word options.		
16		AWE feedback helps me organize ideas in a logical way.		Parra & Calero (2019).
17		AWE feedback helps me improve the content quality of my writing.		
18	Motivation	Using AWE feedback enables me to be more engaged in writing.	Zhai & Xiaomei (2021)	
19		Using AWE feedback increases my productivity through encouraging me to write more frequently.	(Wilson & Czik, 2016)	
20		I feel motivated to improve my writing because of the feedback I receive from AWE.		

21	Behavioral	I intend to use AWE feedback in the future.	Zhai & Xiaomei (2021)
22	intention to use	I want to recommend AWE feedback to others	
23		I will use AWE feedback frequently in the future.	
24	Facilitating	I have the resources necessary to use AWE	
25	Conditions	I have the knowledge necessary to use AWE.	

Appendix P. Students' Post- Treatment Questionnaire

Instructions: Please read the statements below and select the option that best reflects your opinion (SA = Strongly Agree, A = Agree, N = Neutral, D = Disagree, SD = Strongly Disagree).

No	Section	Statements	SA	A	N	D	SD
1	Perceived trust	I think I can rely on AWE to identify my writing mistakes.					
2		I think that the AWE feedback on my writing is fair.					
3		I trust that AWE keeps my personal information safe.					
4		Overall, I think that AWE feedback is trustworthy					
5	Perceived ease of use	The AWE feedback was clear and understandable.					
6		The AWE feedback was relevant to my writing problems					
7		AWE offers flexibility in writing as to time and place.					
8		The AWE feedback enhanced my writing by immediately providing me the corrections and suggestions.					
9		I find AWE easy to use.					
10	Autonomy	AWE feedback helps me feel more independent in my writing process					
11		AWE allows me to self-correct my mistakes without relying on others					

12		I feel more confident writing on my own after using AWE feedback.					
13	Perceived usefulness	AWE feedback teaches me how to use correct grammar structures in my writing.					
14		AWE feedback improves my spelling and punctuation accuracy.					
15		AWE suggestions make my sentences clearer by offering better word options.					
16		AWE feedback helps me organize ideas in a logical way.					
17		AWE feedback helps me improve the content quality of my writing.					
18	Motivation	Using AWE feedback enables me to be more engaged in writing.					
19		Using AWE feedback increases my productivity through encouraging me to write more frequently.					
20		I feel motivated to improve my writing because of the feedback I receive from AWE.					
21		I intend to use AWE feedback in the future.					

22	Behavioral intention to	I want to recommend AWE feedback to others					
23	use	I will use AWE feedback frequently in the future.					
24	Facilitating	I have the resources necessary to use AWE					
25	conditions	I have the knowledge necessary to use AWE.					

Appendix Q. Students' Post- Treatment Interview

Theme1: Overall impressions and perceptions of the AWE tool

Q1 how do you evaluate the tool of Automated writing evaluation of virtual writing tutor?

THEME2: Perceived effectiveness and usefulness in improving their writing skills

Q2: Did it help you improve your level? How?

Q3: Did it provide helpful feedback in these components of the writing skill: grammar, vocabulary, mechanics (spelling punctuation), content and organization?

Q4: Did you take the feedback it has given you into consideration when you made your final draft?

THEME3: Autonomy and motivation towards using the tool

Q5: Do you feel like it made you independent when providing feedback that you can rely on yourself without needing the teacher's feedback?

Q6: Did you feel motivated to write with the use of the tool?

THEME4: Future intentions for using the tool.

Q7: Do you intend to use this tool it in the future? Why or why not?

Appendix R. Scoring Rubric: Adapted from Jacob et al.'s (1981) scoring profile (as cited in Hughes, 2003; Weigle, 2002); Ardiyanto (2021) and Brown and Lee (2015)

Writing components	Score	Performance Criteria
<p>Quality</p> <p>Content Knowledgeable <i>- Demonstrates clear understanding of the subject</i> <i>- Uses facts and ideas related to the topic</i> <i>- Recognizes and discusses several aspects</i> <i>- Shows how these aspects connect to each other</i></p> <p>Substantive <i>- Includes more than one main point</i> <i>- Supports ideas with examples, comparisons, or definitions</i> <i>- Original and concrete development of content</i></p> <p>Thorough Development <i>- Expands main idea clearly</i> <i>- Uses an appropriate method of development (e.g., example, contrast, description)</i> <i>- Considers more than one viewpoint</i></p> <p>Relevance <i>- All content directly relates to the topic</i> <i>- No unrelated ideas included</i></p>	4	<p>Excellent to Very Good: Thorough and insightful development of the topic. Paragraph reflects strong understanding, with multiple well-developed points supported by specific details. Ideas are clearly relevant, original, and logically related</p>
	3	<p>Good to Average: Generally logical structure with some choppiness. Transitions may be inconsistent. Main idea is present but development could be clearer.</p>
	2	<p>Fair to Poor: Ideas are underdeveloped and vague. Limited supporting details. Several irrelevant or unclear parts.</p>
	1	<p>Very Poor: Lacks knowledge or content. Paragraph is mostly off-topic, unclear, or too minimal to evaluate</p>
<p>Organization</p> <p>Fluency <i>- Ideas build logically and clearly</i> <i>- Smooth flow without confusion</i></p> <p>Clear Ideas <i>- A controlling idea or topic sentence is present</i> <i>- Supporting ideas relate clearly to it</i></p> <p>Succinctness <i>- Paragraph avoids repetition or unrelated ideas</i></p> <p>Logical Sequencing <i>- Follows a logical order (time, space, importance)</i> <i>- Uses transitions to guide the reader</i></p> <p>Cohesion <i>- All sentences support one main idea</i> <i>- Paragraph reads as a unified whole</i></p>	4	<p>Excellent to Very Good: Clear, logical organization with smooth progression of ideas. Paragraph starts with a strong topic sentence and ends with a concluding sentence. Transitions are used effectively. All sentences are cohesive and contribute to the paragraph's unity</p>
	3	<p>Good to Average: Generally logical structure with some choppiness. Transitions may be inconsistent. Main idea is present but development could be clearer.</p>
	2	<p>Fair to Poor: Paragraph lacks clear structure. Ideas may appear disconnected or underdeveloped. Poor or missing transitions.</p>
	1	<p>Very Poor: No logical sequence. Paragraph lacks focus, organization, and flow. Not enough to evaluate.</p>
<p>Accuracy</p> <p>Vocabulary Sophisticated Range</p>	4	<p>Excellent to Very Good: Uses a wide and precise vocabulary. Word choices are appropriate, expressive, and accurate. Effective use of idioms</p>

u r a c y	<i>- Uses a variety of precise and appropriate vocabulary</i>		and word forms. Language fits the tone and purpose of the paragraph
	<i>- Expresses subtle ideas or feelings clearly</i> Effective Word/Idiom Choice	3	Good to Average: Vocabulary is adequate but may include occasional errors. Some words or idioms may not be natural, but meaning remains clear.
	<i>- Vocabulary fits context well</i> <i>- Idioms and expressions used correctly and naturally</i> Word Form Mastery	2	Fair to Poor: Limited range of vocabulary. Errors in usage and word forms confuse meaning. Tone may be inconsistent or inappropriate.
	<i>- Correct usage of word forms (noun, verb, adj, adv)</i> <i>- Accurate use of prefixes, suffixes, and compounds</i> Appropriate Register	1	Very Poor: Very basic or incorrect vocabulary. Frequent errors obscure meaning. Vocabulary does not suit the topic or reader
Language use Sentence Structure	<i>- Sentences vary in length and form</i> <i>- Includes complex and compound structures</i> <i>- Uses parallel and clear phrasing</i>	4	Excellent to Very Good: Clear, complex, and correct sentence structures. Varied forms with few or no errors. Strong control of grammar.
	Grammar	3	Good to Average: Sentence structures are mostly correct but may lack variety. Some grammatical errors present but do not interfere with meaning
	<i>- Accurate use of subject-verb agreement</i> <i>- Tense consistency</i> <i>- Correct word order and grammatical functions</i>	2	Fair to Poor: Frequent errors in sentence structure and grammar. Errors interfere with clarity and flow
	<i>- Proper use of articles, pronouns, and prepositions</i>	1	Very Poor: Major grammatical errors dominate. Paragraph lacks readable structure. Meaning is unclear or not enough to evaluate.
Mechanics Spelling	<i>- Correct spelling of common and topic-specific words</i>	4	Excellent to Very Good: Very few or no mechanical errors. Spelling, punctuation, and capitalization are correct and support clarity. Paragraph is correctly formatted.
	Punctuation	3	Good to Average: Minor mechanical errors, but meaning is not affected. Paragraph structure is acceptable.
	<i>- Accurate use of periods, commas, etc.</i> Capitalization	2	Fair to Poor: Frequent mechanical errors. Paragraph structure is unclear or inconsistent. Errors distract the reader.
	<i>- Capital letters used appropriately</i> Paragraphing	1	Very Poor: Errors are frequent and interfere with understanding. Paragraph may be unreadable or not enough to evaluate.
	<i>- Paragraph is indented and structured</i>		

Appendix S. Lesson Handouts

Lesson 1: Descriptive Paragraph :

The Stairway

When I was two or three years old, I lived in a house that had a strange, atmosphere (1). I do not remember anything about the house except the stairway (2). It was dark, squeaking, and quite narrow, and its steps were a little high for me to climb up(3). From the bottom of the stairway, it seemed like an endless climb to the top (4). Beyond the darkness at the top of the stairway, there was an elegant, middle-aged lady leaning against the wall (5). I had to pass her every time I went to my room, for my room was the first room beyond the stairs on the second floor (6). The lady wore a beautiful dress with a quiet pattern and a tinge of blue, and her peaceful eyes stared at me every time I went up the stairs (7). As I carefully climbed up the last step, her eyes became fixed on me (8). She didn't talk, nor did she move (8). She just stood there and watched me clamber up the stairs (9). One day I touched her, but she did not react (10). Her face did not change expression, nor did she even blink. She just kept staring at me with her glittering eyes (11). Later, we moved out of the house, and I never saw her again (12). Now I know that the lady was a mannequin (13). My aunt, who lived in the house, used it for her dressmaking class (14). I did not know my mother (15). Maybe I imagined that the mannequin standing at the top of the stairs was my mother (16). The stairway with the strange atmosphere has an important place in my earliest memories (17).

Questions: 1. What does the writer say about the atmosphere of the house in the first sentence?

2. How does the writer describe the stairway? Underline the words that describe it.

3. When the writer first describes the woman, is he looking up at her or down at her?

What does he describe about her first? What does he describe last?

4. What is the topic and the controlling idea of the topic sentence

What are the supporting sentences?

My Banana Garden

Behind my childhood home, there is a large piece of land that is surrounded by banana trees growing in wild disorder (1). Crowds of banana trees grow freely everywhere. Their green leaves are so thick that sunlight cannot pass through (2). Underneath the trees, the ground is so moist that wild mushrooms and plants grow there all year around (3). In the center is a wild field where the children of my village often fly kites (4). Every evening, just before sunset, some birds arrive to look for a place to rest their tired wings (5). They want to land in the dark banana garden, but the banana leaves are too wide to be made into nests (6). The birds cry out and then fly away, seeking a better place to nest (7). During the rainy season, it rains for days and days, and the banana leaves become glossy and slick (8). The rain also makes the banana garden produce a very strange melody (9). On rainy days, I used to sit near my window and listen to this wonderful song (10). Now, whenever I hear the plop-plop-plop of raindrops on the roof of my small, tidy apartment in the city, I remember the beautiful, wild banana garden of my childhood (10).

Questions: 1. Find the topic sentence of this paragraph. What is the topic? The controlling idea?

2. Does the paragraph have a concluding sentence?

3. Circle any spatial order expressions you can find. Is there a spatial order pattern or no pattern?

Task 2: Read the following topic sentences for descriptive paragraphs. Then discuss with your partner or group some possible details to describe the place. Next, decide on the best kind of spatial order to use in the description: *right to left, left to right, top to bottom, far to near, outside to inside, and so on*. Finally, write your details in spatial order on the lines.

Topic sentence: 1. After my sister spends two hours getting ready to go out, her room looks as if it had been hit by a magnitude 8.5 earthquake.

Supporting sentences: a. From the doorway, you see nothing but a mountain of clothes all over the floor.

b.

c.

Topic sentence: 2. The park near my house is full of activity on a sunny weekend afternoon.

Supporting sentences: :

a. _____.

b.

c.

Task 3: Choose one of these topics, generate a topic sentence and supporting sentences then write a full paragraph.

1. The emergency room of a hospital,
2. A busy airport terminal
3. A subway station (or a bus stop) at rush hour
4. A storm

a little further on;	beneath	farther along	in front	right of
alongside	beyond	just to the left	near	to the east
behind	down	in back	on top of	up

Lesson 2

Lesson 2: Cause and / or Effect Paragraph

Causes and effects focus on why things happen and what their results or consequences are.

- a) Causes are the reasons why something happened; they answer the question “Why did the event happen?” The cause of a car accident might be bad weather conditions, inattention on the driver’s part, or faulty brakes. Causes occur before the event and make the event happen.
 - b) Effects are the direct results or consequences of an event; they respond to the question “What happened because of the event?” The effects of a car accident might be injury, litigation, or increased insurance premiums. Effects come after the event and are the direct results of the event.
-

Task 1: Determine the type of these two paragraphs, Which one expresses cause and which one expresses effect

Paragraph 1:

Going Nowhere

My decision to return to school was motivated by my desire to better myself. After working for minimum wage for two years, I realized that without a degree, I couldn’t earn enough money to support myself, let alone support a family. My salary barely covered my living expenses, and I had nothing left over for emergencies, extras, or savings. Without a degree, I had no hope of getting a promotion or a raise. My job and my life were going nowhere, and I was beginning to feel like a loser. I needed to make a change; I needed to do something to turn my life around and have a brighter future. When I found out I could take classes part-time and keep my job, I decided that going back to school was the perfect solution. It would allow me to work toward a degree while supporting myself.

Paragraph 2:

Poor but Proud

My decision to return to school has had a big impact on my life. First, because of the added expense of books and tuition, I have even less spending money than I did before I came back to school. This has meant that I’ve had to postpone making big purchases such as replacing the dishwasher when it broke, and I’ve had to cut back on small expenses such as going out to eat and going to the movies. Not only do I have less money than before I went back to school, but I also have less time. Rather than watching TV after dinner, I now study. Gone are the days when I could spend hours hanging out with my friends. These days most of my free time is spent studying and completing reading and writing assignments for my classes. By far the most important effect on my life, however, has been the change in the way I see myself. Through my experiences in school, I have gained a new respect for myself. I have learned I can set my mind to something and do it, and this new confidence in myself far outweighs the temporary inconveniences of not having as much time or money as I once did.

- a) Determine the topic sentence of each paragraph.
- b) Define the supporting sentences of both paragraphs.

Task 2: Read these two paragraphs and answer the questions below:

Paragraph 1:

Treatment of American Indians

1 Two major policies, the Indian Removal Act of 1830 and the Dawes Severalty Act of 1887, had profound and lasting effects on American Indians. 2 In 1830, President Andrew Jackson signed the act that authorized the United States government to transfer eastern American Indians like the Cherokee into unclaimed western territories. 3 After several years of court battles, what followed was one of the most heartbreaking events in early American history—the Trail of Tears. 4 Thousands of Cherokee men, women, and children were forced to march more than a thousand miles to Oklahoma. 5 Estimates say that at least four thousand died on the journey. 6 Then, in 1887, the Dawes Act allowed the United States government the right to divide reservation lands among individual American Indians and their families. 7 In other words, it gave plots of land to those who were willing to sign a registry, anglicize their name, and renounce allegiance to their tribe. 8 Reservations were broken up, tribes fought among themselves, and the unity that was central to tribes’ survival disappeared. 9 Today, there are about three hundred reservations in the United States, but there are over five hundred recognized tribes. 10 Most reservations are located in the western portion of the United States in areas that often lack natural resources, and many have high rates of poverty and unemployment.

Paragraph 2:

Why I Stopped Smoking

1 For one thing, I realized that my cigarette smoke bothered others, irritating people’s eyes and causing them to cough and sneeze. 2 They also had to put up with my stinking smoker’s breath. 3 Also, cigarettes are a messy habit. 4 Our house was littered with ashtrays piled high with butts, matchsticks, and ashes, and the children were always knocking them over. 5 Cigarettes are expensive, and I estimated that the carton a week that I was smoking cost me about \$2,000 a year. 6 Another reason I stopped was because I felt exploited. 7 I hated the thought of wealthy, greedy corporations making money off my sweat and blood. 8 The rich may keep getting richer, but—at least as regards

cigarettes—with no thanks to me. **9** Cigarettes were also inconvenient. **10** Whenever I smoked, I would have to drink something to wet my dry throat, and that meant I had to keep going to the bathroom all the time. **11** I sometimes seemed to spend whole weekends doing nothing but smoking, drinking, and going to the bathroom. **12** Most of all I resolved to stop smoking when the message about cigarettes being harmful to health finally got through to me. **13** I'd known they could hurt the smoker—in fact, a heavy smoker I know from work is in Eagleville Hospital now with lung cancer. **14** But when I realized what secondhand smoke could do to my wife and children, causing them bronchial problems and even increasing their risk of cancer, it really bothered me.

1. Which of the above paragraphs lacks a topic sentence?
2. What pieces of evidence does the author use to support the point that the Indian Removal Act and Dawes Severalty Act had lasting effects on American Indians?
3. How many separate causes are given in “Why I Stopped Smoking”?
4. Which sentences in “Treatment of American Indians” contain transition words or phrases? (Write the sentence numbers here.)

Task 3: select one of the topics below to develop as a paragraph

1. What causes stress in students? How does stress affect students? Develop a paper in which you analyze either the causes or effects of stress on students.
2. Discuss the effects of being raised by liberal, authoritarian, or conservative parents.
3. Have you ever quit a job? Discuss why you decided to quit your job or how quitting the job affected your life.
4. Why did you decide to enroll in college? How did that decision change your life? Discuss either the causes or effect of starting college or of dropping out of college.
5. What has been most influential in determining who you are? Has your cultural heritage, race, gender, religion, education, friends, or a particular family member influenced you the most? Explain how this factor or person has influenced who you are (your values, beliefs, actions, and dreams).

<i>cause and effect:</i>	<i>sequence</i>	<i>purpose</i>
consequently, therefore, accordingly, as a result, because, for this reason, hence, thus	furthermore, in addition, moreover, first, second, third, finally, again, also, and, besides, further, in the first place, last, likewise, next, then, too	for this purpose, for this reason, to this end, with this object

Lesson 3

Argumentative Paragraph

An argumentative paragraph is used when you are arguing for or against a claim or when you are trying to persuade someone to agree with you.

Avoid these pitfalls when deciding your argumentative topic:

1. **Avoid factual topics:** If a topic is either true or false, the answer can be looked up or researched, but there is no purpose for argument. For example, there would be no point arguing that the Algeria had its independence in 1962 because the statement is either true or false, and no amount of arguing will alter the facts.
2. **Avoid obvious topics :** If everyone would agree with a statement, then there is little point in building a careful argument to support it. For example there is no need to argue that smoking is harmful for health. However, A more interesting and controversial topic for a general audience would be the statement that smoking should be banned in the workplace or in public places.
3. **Avoid unfair arguments:** Don't distort the truth or mislead your audience, and don't unfairly characterize the opposition or its case.

Strategies for Arguments :

1. **Use Tactful, Courteous Language :** The most important idea is to keep the focus on the issue and not on the people involved in the debate, and to not refer to them in rude terms. Don't write, "People who talk on the phone while driving are stupid." "My opponents say that vaccines don't cause autism." Instead, write, "Supporters of vaccines say that vaccines don't cause autism," which suggests that those who don't agree with you are still reasonable people who are willing to consider differing opinions.
2. **Establish Your Credibility :** Credibility is essential for arguing persuasively, and can be established through personal experience, and researching the topic and using that evidence as a supporting point.
3. **Point Out Common Ground :** Another way to persuade readers to consider your opinion is to point out common ground—opinions that you share. Find points on which people on all sides of the argument can agree. Perhaps you are arguing that soda machines should be banned in schools. Before going into detail about your proposal, remind readers who oppose such a ban that you and they share certain goals: the importance of proper nutrition and a lower obesity rate for children and teens.
4. **Provide Logical Support:**The most important idea is to provide logical support for your position, such as explaining why librarians are important to students' success and why more librarians should be available. This can be done by providing examples of delays in which have had to wait more than an hour to get help with research skills on several occasions and every time you must wait for more than an hour, it stalls your progress and hurts your ability to finish the project on time. Also you can survey other students, and finding out how many students use the library each semester and how many research papers are assigned.
5. **Acknowledge Differing Viewpoints :** It is important to acknowledge other viewpoints, such as those that conflict with your own, by citing them in your topic sentence and including a separate sentence before your topic sentence to acknowledge the opposing viewpoint. For example, you might say, "Although some students believe that studying a foreign language is a waste of time, two years of foreign-language study should be required of all college graduates." In the first part, you acknowledge the other side's point of view; in the second, you state your opinion, suggesting that yours is the stronger viewpoint.
6. **When Appropriate, Grant the Merits of Differing Viewpoints:** Admit that the other side has a valid point, but make it clear that your argument is stronger. For example: "Granted, recycling reduces landfill waste and conserves natural resources, but mandatory curbside recycling will cost taxpayers too much and, therefore, curbside recycling should be voluntary."
7. **Refute Differing Viewpoints:** Sometimes simply acknowledging a differing viewpoint and presenting your own may not be enough. When you are dealing with an issue that your readers feel strongly about, you may need to rebut an opposing viewpoint by pointing out problems with that viewpoint. You can use this strategy at any point in your paragraph. For example you know that many supporters believe that vaping can help people quit smoking cigarettes. You might rebut that point by citing that it can lead to serious health problems.

Activity I: Match each case with the appropriate above-mentioned strategy.

- _____ 1. While homeless shelters are one answer to helping the homeless population, a better answer is providing needy families with more affordable housing, job training, and subsidized childcare.
- _____ 2. Granted, online classes are an excellent option for college courses, but they work primarily for students who are self-motivated and not for students who lack time management skills.
- _____ 3. Supporters of closed or confidential adoption value the privacy of the birth mother.
- _____ 4. We all want what is best for our children and believe that they should be protected.

Lesson 4

_____ 5. The new athletic center sounds like a good idea, but college students, already financially strapped, would have trouble paying the proposed tuition increase to cover the cost of building it.

_____ 6. Students who are struggling in classes often need the extra help that tutors can provide, so the college should open a tutoring center.

_____ 7. Having lived alone for ten years, I can say with certainty that there are some benefits to not having roommates.

Activity 2

Cigarette smoking has been proven to be harmful. Should it therefore be made illegal?

“Yes”: Because smoking has been shown to have so many harmful health effects, the sale of cigarettes should be made illegal.

“No”: Although smoking has been linked to various health problems, adults should have the right to make their own decision about whether or not to smoke. Smoking, therefore, should not be made illegal.

1. *Animals feel pain when they are killed for food. Is eating animals therefore immoral?*

Yes: _____

No: _____

2. *Professional boxing often leads to serious injury. Should this sport be outlawed?*

Yes: _____

No: _____

3. *The obesity rate among children and teenagers is rising. Should schools ban the sale of soda and junk food?*

Yes: _____

No: _____

4. *Some teenagers commit violent crimes. Should they be tried in court as adults?*

Yes: _____

No: _____

Activity 3

Mandatory Attendance Isn't the Answer

1 Teachers want students to learn, and students want this, too. 2 They both know that one of the best places to learn is the classroom. 3 In college, however, class attendance shouldn't be mandatory. 4 First of all, mandatory attendance has its flaws. 5 Even if students are in class, they may not be learning. 6 A student may be so tired from pulling a double shift at work that he dozes off in class, and another student may be preoccupied because her daughter is sick. 7 Some teachers are too nice, so they don't enforce the attendance policy. 8 If a student begs or gives a sob story, a teacher might make an exception. 9 Teachers sometimes forget to take attendance, so those who weren't in class get a free pass, which is unfair. 10 Another reason attendance shouldn't be mandatory is because college students have valid reasons for their absences. 11 Many students have jobs, and sometimes a boss may be inflexible about a work schedule. 12 Plus, students often cannot afford to miss work. 13 Many students have a family, which is just as important as school. 14 A child might be sick, or a babysitter might cancel at the last minute, causing a student to miss class. 15 Students might also miss class because they are sick and don't want to make anyone else sick. 16 The most important reason against a mandatory attendance is that college students are responsible for their own learning. 17 Although some students may be recent high school graduates, in college they are considered adults. 18 If students miss class, they can catch up by asking classmates for lecture notes or emailing instructors about their absence. 19 When a student simply “blows off” class, that student should accept the consequences. 20 Some supporters of mandatory attendance worry that students will think that class is optional if attendance is no longer required. 21 However, teachers can emphasize its importance and promote attendance by having in-class activities that can't be made up later. 22 For all these reasons, mandatory attendance has no place in college.

Bring Back Public Humiliation!

1 Society has gotten lazy about manners, and in order to get people back on track, public humiliation should be reinstated. 2 One offense that many people are guilty of is forgetting to say “please” or “thank you.” 3 Using words like “please” and “thank you” shows gratitude to others for their actions, but omitting these words shows a lack of concern for how others may feel. 4 Those who are found guilty of this offense should be required to stand outside of the location where they committed the offense and wear a board that announces, “I don't know how to use ‘please’ and ‘thank you.’ Please help me practice.” 5 They should be required to do this exercise for one hour per offense. 6 In order to be good parents, people should teach their children to use “please” and “thank you.” 7 Another offense that many people are guilty of is talking on cell phones at inappropriate times. 8 When people are

letter would alert others that the person is guilty of being rude. 10Restaurants could refuse service to or have a special section for people bearing the letter “R”, stores could force people with the letter “R” to use one specific check-out line. 11In this way, people in general would know that the offender had treated others disrespectfully. 12A final rude offense that many people are guilty of is aggressive driving like tailgating, cutting off other cars, or failing to stay in one lane. 13People who are found guilty should be required to turn in their car for a period of a month and drive a punishment car. 14Punishment cars would be painted in obnoxious colors and announce that the driver had “committed rudeness.” 15Using public humiliation to deter social misbehavior has a long history of working and should be brought back in full force before society’s rudeness gets out of hand.

About Unity

1. Which sentence in “Bring Back Public Humiliation!” should be eliminated in the interest of paragraph unity? (Write the sentence number of the paragraph.)

About Support

1. Where is the topic sentence in each paragraph?
2. How many reasons are given to support the topic sentence in each paragraph?
 - a. In “Mandatory Attendance Isn’t the Answer”
 - b. In “Bring Back Public Humiliation!”
3. Which sentences in “Mandatory Attendance Isn’t the Answer” point out common ground?
4. Which paragraph rebuts differing viewpoints?

About Coherence

1. What transition words or phrases are used to introduce the three reasons listed in “Mandatory Attendance Isn’t the Answer”?

Lesson 5

Comparison and contrast

Comparison and contrast are two everyday thought processes used to understand and make judgments about two things. For instance: Two television programs, two professors, two jobs, two friends, or two possible courses of action in a particular scenario. The goal of comparing or contrasting two things is to better comprehend each of them and, occasionally, to pass judgment on them.

Methods of Development

One Side at a Time: When you use the one-side-at-a-time method, follow the same order of points of contrast or comparison for each side, as in the outline above. For example, both the first half of the paragraph and the second half begin with the same idea: what dress would be worn. Then both sides go on to the bouquet, the car, and so on.

A. Expectations (first half of paragraph)

1. Dress (expensive, silver)
2. Bouquet(catching, fragrant)
3. Car (fancy, expensive)
4. Dinner (shrimp)
5. Dancing (all night)

B. Reality (second half of paragraph)

1. Dress (ugly, pink)
2. Bouquet(NOT catching, no scent)
3. Car (stripped-down Chevy)
4. Dinner (roll and celery)
5. Dancing (none because of Sickness)

My brother's wedding.

1 My brother's wedding was nothing like what I expected it to be. **2** From the start of his engagement , I had pictured putting on a sleek silvery dress that my aunt would make and that would cost more than \$500 in any store. **3** No one else would have a gown as fascinating as mine. **4** I imagined myself catching the bouquet of a lovely deep-red corsage after the bride tosses it in the air, and I pictured myself happily inhaling its perfume all evening long. **5** I dreamed of sitting in a fancy car of one of my brother's friends. **6** Moreover, I thought that in the evening, we would be capped by a delicious shrimp dinner at the buffet and by we will all dance together into the early morning hours. **7** The wedding was held on May 15, 2005, at the Pony Club on Black Horse Pike. **8** However, because of an illness in her family, my aunt had no time to finish my gown and I had to buy the only dress I could find in my size at such short notice. **9** Not only was it ugly, but it was my least favorite color, pink. **10** My cousin, whom I hate so much, was the one who captured the red roses. Despite they would have looked terrible on my pink gown, and I do not remember them having any scent, I still hated the idea that she succeeded at catching the. **11** My brother's friend was out of town, and I stepped outside and saw the stripped-down Chevrolet trunk that my brother used at good delivery. I found myself obliged to ride it with a bunch of old women as they kept silent the entire trip. **12** After we arrived at the party room, I was already feeling sick and my stomach hurt. **13** Therefore, I did not have much more to eat than a roll and some celery sticks. **14** Worst of all, I left early without dancing because I was taken to the doctor after I had a sharp pain in my stomach and could no longer stand staying at the party.

Point by Point

A. Class schedules

1. High school students go to school every day.
2. College students have varied schedules.

3. High school students go to school at least six hours a day.
4. College students may be in class as little as two hours a day.

B. Homework

1. High school students may have only an hour or two of homework.
2. College students need to spend at least two hours on homework for each hour of class.

C. Attitudes toward social activities

1. High school teachers accommodate student activities by adjusting assignments and homework.
2. College professors expect students to meet assignment deadlines regardless of extracurricular activities.

D. Syllabus and deadline reminders

1. High school teachers don't always use syllabi with schedules, and they remind students of due dates.
2. College professors hand out syllabi with due dates at the beginning of the semester and rarely remind students of the deadlines.

Keys to Success in College

1 College is very different from high school, and in order to succeed, students should practice good organizational skills that aren't commonly needed in high school. 2 First of all, instead of going to class every day, students may attend college classes only one day a week, three days a week, or even at night. 3 With this flexibility, students need to schedule blocks of study time in order to make sure they are getting their work done on time because it can be very tempting not to study until the last minute. 4 In high school, students are in class for at least six hours a day, and teachers often schedule time in class to work on assignments. 5 Conversely, in college, students may spend as little as two hours a day in class, and professors rarely allow in-class time to work on assignments. 6 In high school, students may need to spend an hour or two each evening on homework, but in college, students are expected to work on homework for at least two hours for each hour they are in class. 7 High school teachers and college professors have very different attitudes toward students' social lives. 8 High school teachers often accommodate students' activities like prom, sports, and school plays by assigning less homework, so students can participate in the activities. 9 On the other hand, college professors aren't concerned about activities outside of the classroom; regardless of students' schedules, they must complete the assignments on time. 10 Finally, in high school, teachers don't always use syllabi with course schedules, and they spend a lot of time reminding students about due dates. 11 College professors, however, hand out the syllabi at the beginning of the semester and expect students to complete the assignments by the due dates with few or no reminders. 12 Students who are new to college may find it difficult at first, but with good organization and planning, students can succeed.

1 From the fourteen applications received for the job of receptionist, two applicants stand out. 2 Following is a summary of their qualifications. 3 Educationally, the two applicants are quite similar. 4 JZ has completed two years of college, just as SW has, and their grade point averages are approximately equal. 5 JZ's one past employer was very positive. 6 Similarly, SW's past employers gave very high recommendations. 7 Finally, both applicants can start work on the same date (June 1). 8 There are two differences between the job applicants that may influence the hiring decision. 9 The first difference is that JZ's job in a medical office included some contact with patients, whereas SW's volunteer work in the library and gift shop of a local hospital included no patient contact. 10 Second, JZ likes to be part of a team, while SW prefers to work independently. 11 The hiring decision is difficult because both applicants are equally well qualified. 12 However, JZ would be the better choice for the receptionist job because of her experience with patient contact and preference for working with other staff. 13 If there is a future opening for a lab assistant, SW would be an excellent choice for that position.

1. Underline the topic sentence. Does it indicate that the paragraph will discuss mostly similarities or mostly differences?
2. What comparison and contrast signals can you find? Circle them?
3. What other transition signals can you find? Put a box around them.?
4. What pattern of organization does the writer use within the paragraph?

one-side-at-a-time/ block organization

Topic sentence: In my perfect world, my life would be quite different in the areas of work, money, and housing.

- work
- real-life work
- perfect-world work
- money
- real-life money
- perfect-world money
- housing
- real-life housing
- perfect-world housing

point-by-point organization

Topic sentence: In my perfect world, my life would be quite different in the areas of work, money, and housing.

- work
- real-life work
- perfect-world work
- money
- real-life money
- perfect-world money
- housing
- real-life housing
- perfect-world housing

Task A: Write contrast sentences using the given information. Use a coordinating conjunction, a subordinating conjunction,

1. Mary likes to go out at night. Jin prefers quiet evenings at home.
 - a. Mary likes to go out at night. but Jin prefers quiet evenings at home.
 - b. Mary likes to go out at night. whereas Jin prefers quiet evenings at home.
 - c. Mary likes to go out at night. However. Jin prefers quiet evenings at home.
2. Fresh fruits and vegetables taste delicious. Canned ones are tasteless.
3. Eating well and exercising will keep you in good health. Exercising by itself will not.
4. Medical care is free in Canada. People must pay for it in the United States.

Task B: Write sentences of comparison using the words and phrases given. In all sentences, you will have to supply a verb

1. Male students/female students/school sports/participate in (like)
2. Private/public universities/good education (both ... and)
3. The Spanish language/the Italian language (similar to)

Résumé

Cette étude a examiné l'efficacité de l'intégration de la technologie d'évaluation automatisée de l'écriture (AWE) dans le développement des compétences rédactionnelles des étudiants de deuxième année d'anglais à l'Université Mohamed Lamine Debaghine Sétif 2. Après avoir interviewer sept enseignants d'expression écrite, un questionnaire préliminaire a été distribué aux 25 étudiants, les résultats ont confirmé que les apprenants rencontrent effectivement des difficultés en grammaire, en vocabulaire, en mécanique de l'écriture (orthographe, ponctuation, majuscules, etc.) et en organisation générale de l'écriture. La plupart des étudiants ont déclaré recevoir peu de rétroaction et avoir des difficultés à s'autocorriger, tandis que les enseignants ont souligné que la fourniture de rétroaction corrective prend du temps. Par conséquent, l'intégration de la technologie AWE, en particulier l'outil Virtual Writing Tutor, a été suggérée comme solution. Son efficacité a été étudiée au moyen d'un dispositif quasi-expérimental de groupes non équivalents pré-test/post-test, en utilisant une approche mixte comme cadre méthodologique pour guider l'enquête actuelle. Deux groupes intacts, un groupe expérimental (N = 37) et un groupe témoin (N = 37), ont été sélectionnés, et leurs performances au pré-test et au post-test ont été analysées selon cinq sous-composantes d'écriture : contenu, organisation, grammaire, vocabulaire et mécanique. Après 14 semaines de traitement par AWE, le groupe expérimental a obtenu de meilleurs résultats que le groupe témoin au post-test. Un résultat statistique dérivé du test t sur échantillons indépendants a révélé une différence significative de $p < 0,05$ pour plusieurs sous-composantes, notamment la grammaire, la mécanique et le vocabulaire. Ces résultats démontrent les effets positifs de l'intégration d'AWE sur les performances rédactionnelles des participants. De plus, le questionnaire et les entretiens post-expérimentaux ont démontré la perception positive des apprenants quant à l'utilisation de l'outil en classe, soulignant une motivation, une autonomie et une volonté accrues de poursuivre l'utilisation

d'AWE. Il est donc recommandé aux enseignants d'anglais langue étrangère d'intégrer la technologie d'évaluation automatisée de l'écriture en classe afin d'améliorer l'enseignement et l'apprentissage de l'écriture.

Mots-clés : Évaluation automatique de l'écriture (AWE), Évaluation automatique de l'écriture (AWE), Virtual Writing Tutor, étudiants EFL, compétences en écriture, rétroaction

الملخص

تناولت هذه الدراسة مدى فعالية دمج تقنية التقييم الآلي للكتابة (AWE) في تطوير مهارات الكتابة لدى طلبة السنة الثانية لغة إنجليزية بجامعة محمد لمين دباغين سطيف 2. بعد إجراء مقابلات مع سبعة أساتذة مقياس التعبير الكتابي وتوزيع استبيان أولي على 25 طالباً، أكدت النتائج أن المتعلمين يواجهون صعوبات فعلية في النحو والمفردات والآليات (علامات الترقيم والإملاء) فضلاً عن تنظيم الكتابة بصفة عامة. كما أشار معظم الطلبة إلى أنهم يتلقون تغذية راجعة محدودة ويجدون صعوبة في تصحيح أخطائهم بأنفسهم، في حين أقرّ الأساتذة بالطابع المرهق والوقت المستغرق في تقديم التغذية الراجعة التصحيحية. وبناءً على ذلك، تم اقتراح دمج تقنية التقييم الآلي للكتابة، وبالتحديد أداة "الكاتب الافتراضي" (Virtual Writing Tutor)، كحلّ، واختُبرت من خلال تصميم شبه تجريبي ذي اختبار قبلي/بعدي لمجموعتين غير متكافئتين، بالإضافة إلى منهج مختلط كإطار منهجي. حيث تم اختيار مجموعتين قائمتين: مجموعة تجريبية (عددها 37) ومجموعة ضابطة (عددها 37)، وتم تحليل أدائهما في الاختبارين القبلي والبعدي وفق خمس مكونات فرعية للكتابة: المحتوى، والتنظيم، النحو، والمفردات، والآليات. وبعد تطبيق التجربة باستخدام تقنية التقييم الآلي للكتابة لمدة أربعة عشر أسبوعاً، تفوقت المجموعة التجريبية على المجموعة الضابطة في الاختبار البعدي. وأظهرت نتائج التحليل الإحصائي باستخدام اختبار (t) لعينة مستقلة وجود فروق دالة عند مستوى ($p < 0.05$) في عدة مكونات فرعية، لاسيما النحو، والآليات، والمفردات. إذ اثبتت هاته النتائج الأثر الإيجابي لدمج تقنية التقييم الآلي للكتابة على أداء الطلبة في الكتابة. كما أبرز الاستبيان والمقابلات اللاحقة للتجربة مواقف المتعلمين الإيجابية تجاه استخدام هذه الأداة أثناء حصة التدريس، حيث أظهرت زيادة في الدافعية، والاستقلالية، والرغبة في الاستمرار في استخدام التقنية مستقبلاً. وبناءً عليه، يُوصى أساتذة اللغة الإنجليزية كلغة أجنبية بدمج تقنية التقييم الآلي للكتابة في التدريس لتعزيز تعليم وتعلم مهارة الكتابة.

الكلمات المفتاحية: التقييم الآلي للكتابة (AWE)، المعلم الافتراضي للكتابة، طلبة الإنجليزية كلغة أجنبية، مهارات الكتابة، التغذية الراجعة