



Hebron University

Faculty of Graduate Studies – English Department

**The Effectiveness of Online Learning on Teaching English Writing
Skills During Covid-19 Pandemic at the Negev Schools**

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This thesis is submitted in partial fulfillment of the requirements for the Degree of Master of
Applied Linguistics and the Teaching of English, Hebron University, Palestine.

June 2021.

Declaration

I declare that this work is my own and the work of others used in the completion of this thesis has been duly acknowledged. I also declare that this research has been implemented according to the Academic Good Conduct and that all experimental and other investigative results have not been falsified.

Acknowledgement

I would like to show sincere appreciation and gratitude to Dr. Mohammed Farrah, my instructor and guide in this study, for his efforts that made this study what it is today.

I would also like to thank all instructors who took part in enhancing my knowledge in Hebron University, and in all the stages in which I passed during my academic progress.

It is also inevitable to thank all the researchers and scientists who participated in this field, for the studies and papers which they published and made available for researchers like me, as they have been the greatest help through this study.

I want also to express heartfelt respect and appreciation to the staff of Al-Lakiyyah High School and its students who participated in the experiment, as this effort is the core of this study.

I also acknowledge the support of my family especially my mother who supported me, friends, and fellow students. And I hope this study will be helpful for the future researchers.

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Abstract

This study aims to investigate the effectiveness of online classes on teaching English writing skills, as this mode is applied during the lockdown due to COVID-19 pandemic. The study sample comprised a two 18-student groups ,12th grade in Al-Lakiyya High School in the Negev. One is control group that received conventional face-to-face lecture, and the other is the experimental group that received online lecture. Both groups took pre-test and post-test, in which writing rubrics were assessed, to measure the overall progress achieved by both. In addition to tests, pre- and post- surveys were given to the experimental group to measure their attitudes and agreement regarding satisfaction, ease of use, usefulness, communication effectiveness, and improvement in writing skills. The tests results were really close, with slightly better results for experimental group who achieved 10% progress compared to 7.23% achieved by the control group. Moreover, they are still not sure if they prefer this method over the traditional one, or if they can recommend it for other subjects. The study recommends teachers to be always friendly and patient during classes, and to understand students' aims. It also suggests applying blended learning whenever possible to break the social barrier, and to apply camera-surveilled exams to avoid cheating. In addition, and since students exhibited weakness in vocabulary and language, additional lectures are recommended in these two areas specifically.

Key words: online learning, covid 19 pandemic, E-learning, English writing skills.

Arabic Abstract

مستخلص الدراسة باللغة العربية

فاعلية التعلم الإلكتروني في تعليم مهارات الكتابة باللغة الإنجليزية خلال وباء كوفيد-19

تهدف هذه الدراسة إلى التحقق من فعالية فصول التعلم الإلكتروني عبر الإنترنت في تدريس مهارات الكتابة باللغة الإنجليزية ، حيث يتم تطبيقه أثناء الإغلاق بسبب جائحة COVID-19. تكونت عينة الدراسة من مجموعتين من 18 طالبا بالصف الثاني عشر في ثانوية اللقية في النقب. الأولى هي المجموعة الضابطة التي تلقت محاضرة تقليدية وجهاً لوجه ، والأخرى هي المجموعة التجريبية التي تلقت دروس افتراضية عبر الإنترنت. خضعت كلتا المجموعتين للاختبار القبلي والبعدي ، حيث تم تقييم نماذج الكتابة لقياس التقدم الإجمالي الذي حققته كلتا المجموعتين. بالإضافة إلى الاختبارات ، تم إجراء استطلاعات قبلية وبعديّة للمجموعة التجريبية لقياس اتجاهاتهم وموافقتهم فيما يتعلق بالرضا وسهولة الاستخدام والفائدة وفعالية الاتصال وتحسين مهارات الكتابة. كانت نتائج الاختبارات متقاربة للغاية مع نتائج أفضل قليلاً للمجموعة التجريبية التي حققت تقدماً بنسبة 10٪ مقارنة بـ 7.23٪ التي حققتها المجموعة الضابطة. علاوة على ذلك ، لا يزال الطلاب غير متأكدين مما إذا كانوا يفضلون هذه الطريقة على الطريقة التقليدية ، أو ما إذا كان بإمكانهم التوصية بها لموضوعات أخرى. توصي الدراسة المعلمين بأن يكونوا دائماً ودودين وصبورين أثناء الفصول وأن يفهموا أهداف الطلاب. كما يقترح تطبيق التعلم المدمج كلما أمكن ذلك وتطبيق الاختبارات التي تراقبها الكاميرا لتجنب الغش. بالإضافة إلى ذلك ، وبما أن الطلاب أظهروا ضعفاً في المفردات واللغة ، يوصى بإلقاء محاضرات إضافية في هذين المجالين على وجه التحديد

Chapter One

Introduction

1.0. Introduction

The year 2020 was one of the catastrophic years in the history of humanity, in many ways – health, economy, education, and even social life. The breakout of Covid-19 has changed the world as people know it, since governments imposed very strict regulations, and in some cases uncharted measures, on their citizens in terms of social distancing, hold of operations in business and education, ban of travelling, and many other practices that made our life really different from before.

There were some periods when countries around the globe, including Palestine, superimposed lockdowns and forced people to stay home periodically; this reminded us of the primitive practices exerted in previous pandemic eras like the Spanish flu. “During the 1918-1919 influenza pandemic, when an estimated 675,000 people died in the United States alone, most public schools were closed for weeks to months on end.” (Markel, 2020, p.1). So, history reveals there was a time when humanity banned even education for the sake of health preservation. Luckily, during COVID-19 there was the option of online classes, regardless at this stage of their pros and cons, which must be seen as good news as it provided some sort of education rather than none at all!

The application of online educational methods in formal education is recent and severely under researched although informal online training existed for approximately a decade now, but was not deployed as an integral part of the schools and universities delivery mechanism. In other words,

online education is applied to teaching courses in several fields like business administration and graphic design, but not applied previously in schools and universities to cover materials fully.

There are major substantial differences in the delivery methods between formal and informal learning which this research will explore, albeit slightly, but a major difference to be mentioned early is that teaching online in a formal setting is highly interactive and requires the synchronization between and presence of both the teachers and students. While most of the online courses that have been offered through the past few years haven't been done on real time basis, i.e. the lectures are usually recorded and then students view them whenever they are free, and this means classes are asynchronous between teachers and students and no interaction is required during classes.

In this paper the researcher is concerned with one course specifically, English as Foreign Language (EFL) taught in schools, and specifically in teaching English writing skill. The research attempts to answer a variety of questions in this domain-with a specific interest of exploring the real benefit of online classes in English writing skills, and how effective it is in delivering information to the students.

1.1. About COVID 19

1.1.1 COVID 19 Definition and Global Response

For the benefit of this research, the researcher adopted the World Health Organization's (WHO) definition and symptoms of Covid-19. According to the WHO (2019), Coronaviruses are a group of viruses from a bigger family of viruses called Coronaviridae, which cause symptoms similar to flu and SARS, like hotness, diarrhea, and sour throat. In December 2019, a new version of the virus appeared in Wuhan, China. Its symptoms are severe and can lead to death.

The same report (WHO, 2019) emphasized the importance of adhering to social distancing to avoid the widespread of the pandemic. Part of the social distancing has been imposed in the field of education in the form of online classes, and schools started to teach their courses via online applications like Zoom and Microsoft Teams.

1.1.2 COVID -19 In Palestine and Palestinian Authority's Response

In Palestine, the situation was no different than the rest of the world. The Palestinian Authority's response was to impose a strict lockdown throughout the territories under its jurisdiction. Several critics claimed that the PA response was effective in the beginning but became futile as time passed by. One of the first sectors that got affected by the lockdown was the education sector; schools, colleges, and universities were forced to shut rapidly which forced the sector to consider and apply online learning.

One of the most important reports reviewing the education system during the COVID-19 outbreak in Palestine was a report published by UNESCO in April 2020. The report titled "COVID-19 in Palestine: how distance learning will help student continue education" explained in brief the emergency measures taken by government sectors in Palestinian Territories, especially the procedures applied by Ministry of Education which imposed distance learning.

Moreover, the report mentioned the assistance offered by UNESCO and UNICEF to the ministry of education in Palestine, represented by substantial financial and technical support for the education programs applied by the ministry during the pandemic. The report touched on the challenges faced in applying these procedures, and they include mainly: infrastructure, weak internet networks, power outage, and insufficient awareness about the E-learning importance

among the students and their families. It also mentioned low accessibility to online materials plus availability of computers or smartphones with students.

In addition to anxiety towards E-learning, the issues discussed by UNESCO report –which seem more basic- all combine to form an obstacle for the Palestinian student in learning through online education.

1.2. E-Learning: The What and How

E-learning is a comprehensive and holistic term that includes processes more than online learning, virtual learning, distributed learning, and networked or web-based learning. Letter ‘e’ stands for electronic, so this learning module incorporates all educational activities that are carried out by individuals or groups communicating online or offline, and synchronously or asynchronously through networked or standalone computers and other electronic devices (Chitra and Raj, 2018).

Although expertise is low, Norwegian academics have embraced quickly online teaching. Previous experience in online teaching was reported only by 30% of them, yet 80% reported now that they are using the video-based software Zoom. Other programs and applications used in e-learning include Microsoft Teams, YouTube and PowerPoint Recording. Canvas is ‘official digital platform’ in majority of higher education institutions in Norway, but to our surprise it is not the most used software program (Langford and Damsa, 2020).

The above description is taken from a research paper in University of Oslo, and it summarizes to a great extent the tools that are used in E-Learning in almost the entire world. Another term describing this process is also M-learning, and M here stands for mobile. M-learning can be

defined as “any educational provision where the sole or dominant technologies are handheld or palmtop devices” (Traxler, 2005, p.3).

It can be noticed here that E-learning is more comprehensive than M-learning. Nevertheless, M-learning is expanding and use of mobiles is increasing more and more. As for the applications used in this process, researcher is concerned with ones used by the schools in Palestine specifically and in the Bedouin schools. Zoom, Teams and Google Classroom are the applications that are widely used in the E-learning process.

The methodology is pretty simple, teachers and students install the application on their mobiles (or computers) and attend classes once dates and timings are announced. Another important tool used in the process is the website or portal of the school, where important announcements are posted on it, and assignments are sent through it.

1.3. English as a Second Language

Basic skills to be learnt in the field of ESL are reading, listening, speaking, and writing (Manaj, 2015). The latter two are skills related to the expression of one’s ideas, so what is investigated here is shifting from conventional face-to-face education of writing to online education and measuring how effective it is in teaching the students how to express themselves correctly in writing.

Reading is generally dependent on the self-study of the student, plus it is limited to, to some extent, the material in curriculum provided therefore the effect of adopting an online style will be minimal on the effectiveness of learning this skill with the being said all four parts were significantly influenced by this ‘sudden’ conversion. The deliberate use of the term “sudden” to

highlight that the application of this idea came only as a reaction to the emergency state imposed by the pandemic and was not applied in steps or gradually.

When it comes to the writing, research shows that it is the most difficult part about the ESL. Writing is associated with literacy and proficiency in any foreign language unlike listening and speaking. Reading is the first and basic skill in the way of becoming literate, but writing is the step to interact and express formally. “Writing is the most difficult skill among the four language skills for many learners of ESL/EFL learners because of its complexity in spelling, pronunciation, vocabulary and grammatical structure.” (Rao, 2019, p.5)

Moreover, writing is the skill most needed for the higher education, as most subjects are currently taught in English language, and therefore formal examination techniques (i.e. exams, thesis and dissertations) are written in the English language.

Examining writing from a different angle, one can argue that writing is one of the skills that students can cheat in. Students can get their homework or assignments done by their relatives or friends, which as a result will skew the accuracy of the results and will attain measuring the learning of those students ineffective since they are not the ones producing the coursework.

Writing is a deep skill that needs continuous follow-up and development. Not only that it reflects the maturity and the development of students, but also it is directly linked to their future and their ability to deliver their ideas to the outside world. It is not a skill that can be taught easily online since it is the most difficult skill to learn in the first place (Rao, 2019). and also requires sharper attention by the teacher in support of the students. Writing reinforces and develops reading and vice versa. The two skills are interlinked, and one can draw solicitation and direct correlation between the two.

1.4. Statement of the Problem

Online courses (whether recorded or synchronized) have become a trend in today's world. Learning through the internet can be considered as one of the top learning techniques, if not the top one. Now in the era of the pandemic, it has become a necessity rather than a luxury and schools and educational institutions have to respond to the new requirement by dealing with online education programs.

When it comes to learning writing the researcher found through participatory observation, that most students in our school face difficulties in writing that they do not have in other skills like grammar, reading comprehension, listening, and speaking. Farrah (2012) stated that Arab university students face serious difficulties when they are asked to write essays. He relays this for students' inability to express themselves because of the lack of practicing writing skills and the lack of knowledge and planning. Also, it could be because writing is an extremely hard activity that requires high cognitive skills (Kallogg, 2008).

So, there is a need to investigate the role of using technology along with a constructivist plan to make writing lessons more interactive, constructive and entertaining for students. It is a great opportunity to let students search and construct their own ideas instead of asking for teachers' assistant in every step.

1.5. Objectives of the Research

It is important to define our techniques that can lead us to the aforementioned purpose. The researcher has designed a survey and test for the students who will be the subject of the study. There will be a control group (students in stage before learning online), and an experimental group

(students in stage after learning online). Researcher aims to reach the purpose decided above by investigating the below:

- 1- To see if the students in both control and experimental groups can apply skills of writing correctly after the online e-learning by giving them pre and post-tests and comparing them to check their writing skills.
- 2- To record if the experimental group members are satisfied about the online e-learning and find it useful.
- 3- To investigate the ease of using the online E-learning tools among the students and if it is suitable for interaction and communication with teachers and other students.
- 4- To investigate if students believe that E-learning methods help them in the improvement of the different aspects of learning skills of the writing. And if there are specific writing skills that have been influenced specifically compared to other ones, and how to improve the process to make them delivered well.

1.6. Research Questions

This research is attempting to answer the following:

- 1- Are there statistically significant differences in the experimental students' writing achievement before and after the experiment?
- 2- Are there statistically significant differences in the students' attitude toward the online e-learning regarding to perceived usefulness and satisfaction?
- 3- Do the students view E-learning methods as easy to use and its tools are suitable for interaction and communication with teachers and other students?

- 4- Do the students believe that there are specific writing skills that have been influenced specifically compared to other ones?

The above questions are the main points that seek answer for the aim of finding out about if the online E-learning process is worthy of application and reliable in delivering the writing skills to the students or not, and if it can be effective with applying some changes to it.

1.7. Significance of the Research

On the one hand, this research is specifically important because it is related to the future of our students, and its deductions, conclusions, and recommendations can lead, if considered and applied, to decisions that affect these students' level in English writing, and accordingly their future in higher education as there is a considerable probability for them to study a subject that is mainly taught in English.

On the other hand, the results of this study can be reviewed by anyone involved in the online E-learning process, whether this person is a teacher, student, or a student parent. And after reviewing the study, many additional techniques and modifications can be proposed to improve the process and make it more effective.

The research outcome may also benefit service providers including the electronic devices' suppliers, internet providers, and applications' designers, as it will reveal gaps that can be bridged and identify market opportunities that can be exploited by the suppliers. This is a win-win situation as it will result in improving the process and making it more effective and providing a trading opportunity for the service providers.

1.8. Null Hypotheses of the Research

The researcher is going to impose a group of carefully selected assumptions, deploying null hypotheses in a form of hypothetical answers to the issues proposed above. In this research, researcher is going to prove if they are correct or not:

- 1- There are no statistically differences at $\alpha < 0.05$ between students' performance in writing due to the control or experimental group.
- 2- There are no statistically significant differences $\alpha < 0.05$ in the students' attitude toward the online e-learning regarding to perceived usefulness and satisfaction?
- 3- There are no statistically significant differences $\alpha < 0.05$ in students' view of E-learning methods as easy to use and it tools are suitable for interaction and communication with teachers and other students?
- 4- There are no statistically significant differences $\alpha < 0.05$ in students' believe if that there are specific writing skills that have been influenced specifically compared to other ones?

1.9. Limitations & Delimitations of the Research

Following academic best practices, the researcher acknowledges the unconscious biases as a limitation to this research and tries, to the best of her ability, to mitigate them. The research also identified the following limitations:

- 1- The study is limited to writing skill only which lessens the examination of the integrated dimension of the research. In other words, writing is linked to the other ESL skills and its difficult to isolate in research.

- 2- Limited understanding of the research questions and objectives by students and teachers, which might have led to inaccurate responses to survey, and the ability of students to self-assess is questionable in the surveys, where biases might happen due to exaggeration in evaluating skills or on the opposite side, exaggeration in disparaging them.
- 3- The fact that the research is limited to one semester and two classes weakly may be not enough for students to gain the proper information and experience in writing.
- 4- The fact that the research is limited to one school (Lakiya High School) reduces the spectrum of views and answers since other schools might be facing different problems. The research will recommend that the research gets scaled-up in order to generalize results of the research based on stronger basis.

The researcher deployed proactive means to delimit the research through linking the writing skills, the main area of interest, with the other required skills in ESL where appropriate. The researcher also identified where generalization is appropriate based on professional judgment and lastly the researcher helped the students in understanding the techniques for self-assessment in order to get more accurate results.

1.10. Summary

This paper discusses the effectiveness of the online E-learning through studying the outcomes of the e-learning process and examining its effectiveness in teaching the students, specifically teaching them the English language writing skills. Researchers have debated this matter previously, and many have spoken about factors influencing this effectiveness but it is yet not clear which method is more effective in education, the traditional or e-learning. “There is strong evidence for the heterogeneous outcomes of the effects of online learning, and in particular, a

number of student characteristics such as sex, race/ethnicity, and ability, can moderate the learning outcomes.” (Nguyen, 2015, p.314).

Throughout this endeavor, the researcher will stay mindful to the fact that effectiveness is not a quantifiable entity therefore cannot be measured in a zeros and ones and it is not objective and therefore can be measured in all shades of grey rather than just black or white. Using appropriate techniques can measure effectiveness and evaluate it using scales and degrees, and accordingly researcher will try to measure it and see what its strengths are, and what its weaknesses are. Then, the researcher will explore and recommend areas of improvement of online E-learning performance and outcomes. The exploration will answer which particular aspect does the researcher need to improve? Can this method be adopted permanently, at least partially? Are there any specific parts of the writing skills that should be excluded from this method?

Chapter Two

Literature Review

2.0. Introduction

The rapid change in all areas of life is one of the most prominent features of the current era. Among these changes appeared the tremendous technological revolution that invaded human life in all its aspects and elements. It became a need for people all over the world generally, and the Arabs particularly to interact with these changes to keep pace with all the new developments in the field of knowledge and thought.

This tremendous advancement in technologies has clearly affected the teaching and learning processes. It surpassed the traditional methods and strategies that depend on the direct instructions, where the learner plays the role of the recipient only, to become modern learning methods which depend entirely on the complex interaction between the student and the educational material.

So, it has become imperative for those who are in charge of developing educational processes to generalize the use of modern technologies in all stages of education from the beginning to the end. From this point comes the idea of the current research which is implementing technology and its role in the process of teaching and learning.

It can be said that technology is a human effort and a way of thinking about the use of information, skills, expertise, and human and non-human elements available in a specific field, and its application in discovering the means and invention of tools, machines and materials for solving man's problems, satisfying his needs and increasing his capabilities. So, technology is the embodiment of the imagination that would develop people and expand their perceptions and capabilities.

The development and progress in the field of educational technology has led to the appearance of many technological innovations. Thus, employing them in the educational process, that becomes an urgent necessity in increasing the efficiency of the educational process.

The use of modern communication mechanisms like computers, networks and various tools of sounds, images, graphics, search mechanisms, electronic libraries and internet portals founded to help both teachers and students in the teaching and learning process to exceed the boundaries of traditional classroom. So, it is easy for both to communicate information in the shortest time with the least effort and to achieve the greatest possible benefit and new opportunities for interaction between the two parties.

In this chapter, E-learning is going to be reviewed in more detail, with its types, tools, and limitations. It will be beneficial to see what previous literature has to say about this type of learning as it seems to dominate larger portion of learning methods in the foreseen future. Since the study investigates the effectiveness of online methods to learn writing skills, it is an integral requirement to delve into its characteristics, how it is evaluated and what causes anxiety towards writing skills. Finally, a detailed explanation is given to define the constructive theory.

2.1. E-learning

2.1.1 Definition of E-learning

From the plethora of e-learning definitions given by different researchers a clear definition of the E-learning process can be deduced as: A type or method of learning that comprises a mix of many other types of learning networked, distributed, virtual and web-based learning. The letter ‘e’ in the name stands for electronic, so it is connected to electronic devices like computers and

mobiles. It includes educational activities carried out individually or in groups, synchronously or asynchronously, online or offline, via networked or standalone devices (Chitra and Raj, 2008).

As the name and definition indicate, this type of learning entails the use of electronic devices by both learners and teachers. In the following sections the researcher will go through more details of the E-learning.

2.1.2 Microsoft Teams, the Most Recent Update

As the researcher studies the virtual online classrooms used in education in Palestine, it is inevitable to speak about Microsoft Teams, the online meetings platforms that is used widely more than any other application in Palestinian schools during quarantine related to COVID-19. The researcher can start by the definition given to Microsoft Teams by Wikipedia (2021) as “a proprietary business communication platform developed by Microsoft, as part of the Microsoft 365 family of products. Teams primarily competes with the similar service Slack, offering workspace chat and videoconferencing, file storage, and application integration”. As mentioned, the application was launched to be a business communication platform in fact, not for education purposes. Despite that, it is the application mostly used by schools in E-learning because of its friendly interface and good performance compared to older applications like Skype as it was launched in 2017.

According to Allen and Seaman (2017), six million students participated in at least one online course in higher education institutions in 2015, and this is huge compared to only 1.6 million in 2002. This shows that tendency to utilized online learning increases with time, and it is not exclusive to application related to emergency like the pandemic time.

Pretorius (2018) spoke about how teachers can post assignments to pupils, groups, or all the class via the assignment function in Teams. He also explained that he himself was able to design assignments to all students in his diverse classroom. He evaluated of assignment submission; the student uploads a file to the Assignment tab and it is directed into the Working files folder. The student can still open it using the Teams Assignment tab and edit it. As student has clicks on the Turn In button, it is copied to the Submitted files folder and no changes are permitted after that. When the student is fully prepared to submit, he/she turns in the file. Even after submission the teacher can comment on the file and the students open it and see the comments but cannot edit any more (Pretorius, 2018).

Martin and Tapp (2019) mentioned that “The work on Teams is still in an embryonic stage and the authors intend to adopt the use of Teams across a range of modules and levels of study.” But at the same time, they confirmed that users have exhibited positive responses towards using it, and that there was a general feeling of satisfaction.

So, this tool, like most of Microsoft products, tends to be user-friendly, pretty easy, and understandable by all students, including those who are not very sharp.

2.1.3 Asynchronous vs. Synchronous E-learning

Hrastinski (2008) started by defining asynchronous E-learning before the synchronous one, due to its existence and usage long before the synchronous one. The Asynchronous e-learning pertains recorded online courses which can be simply downloaded to one’s device and watched without internet or synchronization with the tutor of the course. According to Hrastinski (2008), this aspect

has been the motive for so many people to like e-learning and use it, because it offers rewinding, cost saving, and time flexibility.

When synchronous e-learning is discussed, Hrastinski (2008) speaks about technologies like videoconferencing and chat, and that it prevents frustration resulting from isolation because the tutors and students are linked together in real time, and so they can interact with each other and discuss material, ask questions, and talk to each other.

It is worth mentioning that most of the e-learning sessions studies in this research are of synchronous type, as in Palestine, the schools still do not use the technique of recording classes, so the e-learning meant here is the e-learning happening in the real time and the measurements of effectiveness measure the effectiveness of this process in general (of course there is the assignments side which are sent by schools' portals). It is important to notice that this does not mean recorded lectures are seldom used; they are actually more used in universities and institutions of higher education.

2.1.4 Advantages and Disadvantages of E-learning

It is difficult to speak about all advantages and disadvantages of e-learning because every day this sector connected to telecommunications technology evolves and gets developed, so what is applicable now might not be applicable in the near future. However, the main points could be summarized as Lynch (2020) mentions:

- Time and money saving: The importance of this point stems from the fact that learner does not have to pay transportation to attend a face-to-face lecture when he learns by online methods. Not only this, but time is also saved especially in the asynchronous type of e-learning where learner

can adapt the lectures to his time as he likes. It is also a cost-effective option for education since the education institutions reduce their operational costs of their classrooms which do not need to be opened for students, and this means less rent, utility bills, and maintenance costs.

- **Better retention:** This point is specifically important for synchronous learning style, as the more interactive the class is the more the probability for the students to memorize information discussed in the class.

- **Personalized or customized learning:** It is applicable especially when learning is informal, or in other words, optional. It means that the learner chooses what to learn easily and skips what he does not need easily. It also, emphasizes the importance chronological freedom as student can deal with his time freely. When compulsory official education is mentioned in primary and high schools, the importance of this point lessens.

- **Ecologically Friendly:** E-learning harms the environment much less than traditional learning which induces more use of transportation and entails more use of papers and power.

On the other hand, Lynch (2020) also mentions the disadvantages of e-learning as the following:

- **Lack of social interaction:** Face-to-face interaction is limited to zero sometimes, and this might lead to isolation of individuals. This can be noticed that part of the dissatisfaction exhibited by students is due to this point, where they miss the human touch and miss their friends.

- **Not accessible by all:** Good internet service is not accessible by all people. It is a privilege provided for limited portion of globe population, and disconnection problems are still a concern.

- Cheating and plagiarism cannot be avoided: As nobody is watching during the exams, students can create WhatsApp groups or other means of communication to share answers together. In this case, every teacher can find a proper solution to overcome this real problem. Teachers may apply policies like turning the laptop or mobile's camera on while student is answering the questions of an online exam, this way he cannot move or cheat easily because he is under surveillance practically.

- Strong self-motivation and time management skills required: Students are on their own in e-learning especially that their classmates are not close to them and they must run things lonely and by themselves. It also needs proper time management traits, as the process might be boring and time consuming.

- More focus on theory: Especially in case of asynchronous education, long time will be spent on watching videos and podcasts. There is no chance for physical interesting experiments witnessed by eye.

2.1.5 Requirements of E-Learning

What must be applied to produce effective E-learning is pretty different than what is done in traditional one. Food Agriculture Organization FAO published in 2011 a guide called "*E-learning methodologies, A guide for designing and developing e-learning courses*" which discussed elaborately the importance of e-learning, how to design its courses, and how to develop it.

The same book states in a dedicated chapter, that the requirements of e-learning are three basic components: The activities, the team, and the technology. The guide states that "Well-developed e-learning courses can be delivered many times to different learners using the same materials"

(FAO, 2011, p.20) and it adopts a model called ADDIE – stands for Analysis, Design, Development, Implementation, and Evaluation of the courses.

In the section of the team, the guide states that “Participation in e-learning projects requires capabilities in certain areas – such as technology and media-related skills – that are not essential in traditional education or training.” (FAO, 2011, p.23) in a statement that emphasizes the importance of technology even before reaching to the section speaking about it. Not only this, but the section also mentions roles of participators and distributes them on the components “or steps” of the ADDIE model.

However, in the section of technology, the guide mentions in general that tools used to activate and develop e-learning are different from those used in traditional one. Further reading in the report can reveal that what is meant is devices (like computers), internet connection, content creation programs (like word), graphic design programs (like Adobe Photoshop), and security requirements.

Despite the fact that most of the guide speaks about E-courses like recorded courses, but its requirements are applicable to online learning applied in schools which connects teachers and students simultaneously (with the availability of recorded sessions option for those who miss the class).

To conclude, the shift from traditional education to e-learning demands a set of requirements which are the following:

1. The shift from the teacher's control of learning to the control of the learner, where he is responsible for learning through managing his activities and developing his personality through understanding, creativity and solving his problems by his own.

2. Providing the financial and human requirements which are necessary for e-learning
3. Preparing appropriate electronic programs and curricula, in addition to training teachers to deal with this electronic environment
4. Planning carefully and setting up a detailed phased plan for implementing and gradually expanding it, and modifying the plans depending on the results of each stage.

Through what has been presented previously, we can compare between traditional education and technology education as follows:

1. Modern teaching methods develop the scientific thinking of learners, teamwork, and the ability to innovate and create. In addition, they overcome the individual differences between students and face the problems arising from the large increase in the number of learners. However, in the traditional methods students do not have the opportunity to carry out any educational activities and thus become negative.
2. Traditional methods neglect the skills of research, reading, expressing opinion, and discussion.
3. E-learning systems contribute in changing the ways in which technology is used as an interactive tool.
4. Also, if we compare traditional teaching and modern teaching, we find a lot of differences in the role of both the teacher and the learner. In the traditional educational system, the teacher plays the first role in transferring and interprets information to the student with the help of books. Whereas, with technology teacher plans to employ

several means to transfer information to the student or to attract him by making the teaching process more flexible.

2.1.6. Anxiety Towards E-learning

Saade et al (2017) carried out a study on the subject of “Anxiety and performance in online learning”. The study was done by cooperation with 1377 students who had taken an online IT course in the first semester in Concordia University, Canada. And the application used in the course was Learning Lab.

The definition of anxiety in online learning is “a feeling of fear from misuse of information technology compromising course performance” (Saade et al, 2017, p.3). This reminds us of anxiety towards English writing learning, which proves duality and similarity of many types of anxiety.

The study categorized the participants in the study based on gender, and age category. The results concluded (which were considered too preliminary to substantiate any conclusions) that 30% of the students exhibited signs of anxiety towards online education, with higher anxiety reported by female participants.

As for the age groups, and judging from the division proposed (17-18, 19-20, 21-22, 23-24, and 25+) it was clear that the age group 21-22 exhibited the most anxiety, while the age group 17-18 exhibited the least percentage of anxiety.

2.2. English Writing Skill

As one speaks about teaching the writing skill via online classes, one should not overlook that the outcome desired is the writing skill, as online learning or education is an end, not means. So, the researcher will try in the coming few subsections to guide the reader to the English writing skill and how to evaluate it.

The English language education, as any language spoken by human beings, is divided into teaching the four basic skills: Listening, Speaking, Reading and Writing. When it comes to writing, “the skill of writing probably seems the most difficult and the least attractive to learn” (Klimova, 2011, p.390). “The learners of any language find writing is the most complex skill and the same is applied to the learners who learn the English language.” (Rao, 2017, p.80). So, there must be an effective way in evaluating the outcomes of writing education process.

2.2.1 Effective Writing Characteristics

A good writing can be distinguished from finding the characteristic of it. This can be summarized into the following which are depicted in figure 2.1 (Rao, 2017).

- 1- Interesting and current topics:** “First of all, the teachers should pay more attention on the topic that they are going to assign it to the learners” (Rao, 2017, p.81). If this element is examined, it can be found that this task is handled by the English curricula, and it is applied by teachers to students based on selections in the book.
- 2- Rich and appropriate vocabulary:** “As there are different terms used for different purposes, the learners are taught how to use the appropriate vocabulary that suits the situation.” (Rao, 2017, p.81). Vocabulary is the main component of writing, where writing

is formed in fact of words. Without vocabulary memorized by the students, writing task cannot be accomplished.

- 3- Variety of grammatical structures:** “The teachers should teach various grammatical structures involved in writing English and train their ELLs in getting mastery over them.” (Rao, 2017, p.82). This is one of the most important components in teaching English and English writing, as grammar is the governing tool that connects vocabulary together in an entity having a meaning.
- 4- Right usage of Punctuation:** Punctuation is defined as "They are signals to the reader that indicate pause, place emphasis, alter the function or show the relationship between the elements of the text." (Jane, 2008, p.122). These include elements like full stop, comma, apostrophe, and many other marks. The writing process should contain proper punctuation marks to be judged as effective.
- 5- Continuous flow of thoughts:** “Writing is best understood as a set of distinctive thinking processes which writers orchestrate or organize during the act of composing” (Flower and Hayes, 2008, 366). This means that when the learner writes, s/he must demonstrate ability to express ideas in smooth flow that does not make the reader feel lost while reading.
- 6- Link ideas coherently:** In the IELTS exam, in coherence requirement for writing band, “*High-scoring responses* have ideas that are clearly organized into paragraphs, each with a clear main point and a logical connection to the rest of the essay.” (Kapelke-Dale, 2018, p.2).
- 7- Use of simple and easy language:** This requirement is important to be delivered to the students. They have to know that applying coherence, smooth flow of ideas, and good use

of vocabulary, don't mean that writing should produce a sophisticate difficult-to-apprehend outcome.

8- Adapt writing suitable to the readers: This factor is important for advance writing teaching, and it is beyond the scope of this paper.

9- Engage readers



Fig.2.1: Characteristic of effective writing skills as Rao(2017) mentioned

The above characteristics summarize how effective writing should be, and to know a good writing product, it should be learnt how to evaluate it or rate it.

2.2.2 Writing Evaluation

Evaluation of writing is commonly done using one of two main methods: holistic and analytic. The holistic method “involves reading a paper quickly in order to gain a broad impression of a writer's skill.” (Klimova, 2011, p.391). This means that holistic evaluation is actually a quick approximation of the learner's skill by an expert. While analytic method “involves an itemized

analysis and is commonly used to identify weaknesses in a student's writing.” (Klimova, 2011, p.391).

To evaluate writing skills, Klimova (2011) proposed five qualities that can be scaled in any written work to evaluate the writer; these were inspired by the work of (Bacha, 2011):

- 1- Content:** This aspect describes the writer’s extent of subject knowledge and the relevance of the written text to what is requested. It is given 30% score weight.
- 2- Organization:** This scale describes the text’s coherence and clarity. It also measures the writer’s fluency and his logical sequencing of ideas. It has 20% score weight.
- 3- Vocabulary:** It describes the text’s richness of words and mastery of meanings. It is given a score weight of 20%.
- 4- Language use:** This is closer to judgement over grammar, as it entails measuring abilities in forming right sentences with correct verb tenses, prepositions, articles and with strong construction and proper word order. It has score weight of 25%.
- 5- Mechanics:** This is related to punctuation, spelling, capitalization, and paragraphing. It is given a score weight of 5%.

So, if a text written by a student is to be evaluated, the above can be applied to measure the ability of the learner in writing a good and clear text.

The researcher believes that a key to understanding the issue, analyzing it properly, and proposing it to the audience, is to simplify it rather than make it sophisticated. Accordingly, this scale will be utilized in evaluating students’ writing skills in the methodology.

2.2.3. Writing Anxiety

Aripin and Rahmat (2021) confirm that “Writing is the most challenging skill among other language skills; reading, speaking and listening.”

Rezaei and Jafari (2014) state that “When a writer experiences writing anxiety, she or he tends to show and express unpleasant feelings such as stress, nervous, worried, and trembling during the writing process.” And these signs are going to be discussed briefly in this section to test how anxiety is exhibited by learners who suffer from it.

Aripin and Rahmat (2021) presented three types of anxiety effects based on Huwari and Al-Shboul (2015). Effects can be summarized into:

- **Personal Effect:** Appearing in the form of grammar and writing mistakes, health issues like high blood pressure and weight loss, and depression.
- **Social Effect:** This can be noticed in the students' isolation and preferring loneliness and feeling highly embarrassed of the comments said by their teachers and peers on their writing.
- **Academic Effect:** This can be appeared in the low academic performance and low marks.

Cheng (2004) classified writing anxiety into three types:

- **Somatic Anxiety:** Having physiological effects like nervousness and tension.
- **Cognitive anxiety:** negative expectation towards writing and fear of negative evaluation.
- **Avoidance-behavior anxiety:** Avoidance of writing activities and classes.

Aripin and Rahmat (2021) also studied the symptoms of writing anxiety on a female ESL student. They exhibited symptoms and signs like touching scarf, fidgeting pen, showing slumped body posture, avoiding eye contact with researcher, and grinning.

The researcher believes that the term anxiety can be considered new to the Middle Easterners, because in fact most of the life components cause anxiety to the people that they don't recognize it if they learn about it. Anxiety is a term introduced in developed countries in which the human welfare is a priority, but in the Middle East when someone suffers from anxiety it is really difficult to specify the reason clearly.

2.3. Constructivism in Learning

Despite the many advantages that are unique to technology education, it will not be feasible if we use technology as a tool for learning only. Otherwise, it will just replace the tradition way of teaching (Rice, Cullen and Davis, 2011).

Modern theories saw that real learning is not in what the teacher teaches to his students, even if they memorize and repeat it. Among these modern theories is the constructivist theory or the theory of constructive learning. The modern constructivist theory confirms that a person builds his information and knowledge internally influenced by his general surroundings of environment, society and language. Each learner has his own way of understanding the information transmitted to him, and his understanding of what he received of information is not necessarily consistent with his teacher's understanding (McLeod, 2019).

The constructivist theory believes that the learner has a fundamental role in determining what will be learned, as he is the discoverer of what he learns through his practice of scientific thinking

based on research, experience, observation and interpretation. The learner in this model is characterized by his own activity and building knowledge (McLeod, 2019).

Constructivism is built on the idea or theory that people actively construct or make their own knowledge, so reality is determined by learner's previous expertise. Basically, learners use their previous knowledge as a foundation and build on it with the new things they learn. Based on this, everyone's distinct experience makes their learning process unique for them (Bada, 2015).

Constructivism is important to be understood by teachers because it affects the way learners learn. Both participants (educator and learner) who consider and respect constructivism theory are aware that everyone brings his own experience along to the class, since their knowledge base and background have crucial influence on their capability to catch new information (Sjøberg, 2010).

Teachers can use this theory to assist learners perceive their previous knowledge in fact. Many elements shape the theory and explain how it really works; the basic element of the theory is that knowledge is constructable, so knowledge is built upon another 'older' knowledge, and this is done in a unique way that is not the same when compared between individuals (everyone constructs his/her knowledge in their own way and based on their own experience) (Bada, 2015).

One more aspect of the theory is that learners learn to learn, as they learn, so the learning process involves building the meaning and the accompanying systems of the meaning in an integrated way. For example, a student preparing a paper about subject in literature or history learns necessarily the grammar and writing skills, and the student preparing for listening part of an exam necessarily prepares for the speaking part of the same exam. Therefore, everything the learner learns gives him perception of other things (Dagar & Yadav, 2016).

Constructivism also proposes the idea that learning is not a passive process, but rather an active one, since the learner cannot sit and expect to be educated without doing any effort, but they must engage in activities and discussions to build knowledge. Not only that learning is an active process, but also a social one, since learning is linked to learners' interaction with others and with educators, so teachers achieve more success when they understand that involving learners is crucial to educate them, and so isolating students can and will hinder the education process (McLeod, 2019).

As the constructivism is linking current education with the previous knowledge, experiences and beliefs then it assures that learning process is contextual, so students don't learn information and theories in a way isolated from the background they already have, but they rather in ways linked to what they already know and believe, even tending to learn or remember certain information is linked and related to the previous information (McLeod, 2019).

Constructivism confirms individualism as it supports the idea that learning is a personal process because it is based on one's own beliefs and background, and since everyone brings with him his own experience that is exclusive to him and is not similar to others', then he learns differently compared to others (Raskin, 2002).

It is true that constructivism emphasizes the importance of hand-on and physical experiences, but this means no training for the mind. This means that successful learning process needs considerable involvement of the mind and mental experience is required to maintain the information learnt (Taylor, 2015).

To help achieve active learning, and according to constructivism, learners need to be motivated so they engage and participate in education, and to turn their minds' attention to the collection, storage, and integration of new knowledge. Without motivation, learners do not manage to reach

to their previous base of information and link it with the new information they are learning (Louvigne et al., 2017).

Constructivism is not only a theory, but it is also a tool that can be applied by teachers to make their classrooms constructivist ones. Teacher is required to create a collaborative environment in which students are actively involved, and teachers are working as facilitators of learning rather than being traditional instructors, as they try to understand the pre-existing background of the learners and accordingly incorporate new knowledge within that (Louvigne et al., 2017).

Teachers in constructivist classroom need to adjust their teaching and methods to fit and match the requirements of learners and their understanding. In constructivist classrooms, knowledge is shared between teacher and learner, and authority is shared between them as well. In addition, teachers work as facilitators and groups of learners tend to consist of small number of participants (Sjøberg, 2010).

This makes constructivist classrooms significantly different from normal ones, since they concentrate on students' doubts and thoughts, and they build on the information already possessed by the learners. To achieve this, teacher forms small groups in which students ask questions and have discussions with the teacher. This means that constructivist classrooms are interactive to a far extent (Taylor, 2015).

The researcher found that despite difficulties faced by education in Palestine, but constructivism is perceived and applied to some extent. The teachers tend to give more time for brainstorming and for group discussions even when the class is online, and the internet is not that fast. Moreover, many factors led to strengthen the students' background and make the classrooms tend to be more constructivists including wide spread of electronic devices like smart phones and

computers, the subscription to home internet and 3G mobile internet by most of the people, and the diversity of information offered by TV channels which are so many compared to the old days.

2.4. Perceptions of the users (recent Studies)

In this section the researcher is going to review recent studies that have been performed in 2020 regarding the opinions of E-learning users. The benefit of these studies lies in their recentness as they are linked directly to our subject, since the studies are done in the lockdown period which is related to COVID-19 outbreak.

2.4.1 Students' Perception towards E-Learning during COVID-19 Pandemic in India: An Empirical Study

This study was performed in August 2020, and published in November of the same year. Khan and others (2020) stated that the objective of the study was to:

- 1- Cognize E-learning importance during pandemic.
- 2- Study online learning benefits from students' perspective.
- 3- Analyze the perceptions of the students of E-learning during lockdown.

It is important here to notice that English language is not included as one of the fields whose students were asked the questions of the questionnaire, so the results of the paper are pertinent to the effectiveness of the online E-learning in general.

The researchers combined the columns of SD and D together, and combined the columns of SA and A together. By mere looking at the table and percentages of people's opinions the researcher

can find that only BEL3 and BEL4 received agreement of less than half of the samples. Not only this, but most of the parameters also received the agreement of more than two thirds.

Again, the same note is applicable here as most of the participants were generally happy with the E-learning (only one parameter received agreement of 42%). So, the study researchers stated that “The study reveals the preferences of students for e-learning as it provides them much freedom to connect with their teachers, fellow students and engage with their study materials at the comfort and flexibility of space and time.” (Khan et al, 2020, p.13).

The researcher wishes to remind that in general, Asian countries like India and Malaysia pioneer in IT services, and this can be an important factor in such results.

2.4.2 Online learning of English language courses via blackboard at Saudi universities in the era of COVID-19: perception and use.

This study was done in May 2020 and accepted in September of the same year by Saudi Researcher Sultan Ahmed in Najran University. The paper studied students’ perceptions towards Blackboard application, and the participating students were 228 of preparatory year (PY) level. The sample was divided into two levels:

- 1- Level 1: In which n= 126 students who had no prior experience with Blackboard.
- 2- Level 2: In which n= 106 students who had prior experience with Blackboard.

The research was conducted to get the below information:

- 1- Perceptions of both 1st and 2nd level at PY students toward Blackboard as the only learning medium during COVID-19 surge.
- 2- Reflection of these perceptions on students’ use of Blackboard.

The research paper gave the summary of students' perceptions as: "In general, the results showed that perceptions of students toward online learning through Blackboard during COVID-19 were not positive, but the perceptions of 1st level students were higher than 2nd level students." (Ahmed, 2020, p.7). What is good about this research is that it specifically studies students' perceptions in online learning of English language. Considering this question as one of the most important ones of the paper, it can be found that 47% of level 2 participants agreed that Blackboard is not useful in learning English, and 62% of level 1 participants disagreed with the question if Blackboard is not useful.

In the conclusion, Ahmed (2020) states that "1st level students who had no prior experience of online learning via Blackboard had slightly positive perceptions, whereas 2nd level students who had prior experience of online learning via Blackboard had less positive perceptions of Blackboard as an online learning tool." And this means that perceptions of the students were really close to neutral with slight lean towards positive perception. The paper attributed this to the technical difficulties and lack of access that might have been face by the users.

The researcher finds this study really close to this paper, in terms of circumstances and the age group of the participants, considering the preparatory year is the first year after the finish of high school, and our sample of participants are in the final year of the high school, which gives this study in Saudi Arabia a special significance.

2.4.3. Learner satisfaction, engagement and performances in an online module: Implications for institutional e-learning policy

This study was conducted in Mauritius by Rajabalee and Santally in August 2020. The study uses questionnaires to measure all three elements mentioned in the title (satisfaction, engagement, and performances). The study cites definition of (Dixson, 2015) for the engagement as "the effort

the learner makes to promote his or her psychological commitment to stay engaged in the learning process to acquire knowledge and build his or her critical thinking”. It is related to the motivation to interact with course content, tutors, and peers.

It was reported that “A positive, but weak association was established between reported engagement with respect to the continuous learning marks and the performances in the final activity.” (Rajabalee and Santally, 2020, p.29)

Paper mentions that “Students were generally satisfied with the learning design philosophy, irrespective of their performance levels. Students, however, reported issues related to lack of tutor support and experiencing technical difficulties across groups.” (Rajabalee and Santally, 2020, p.1)

The experiment done in Palestine to propose this current paper can really reflect different results, not only because the sample reviewed is formed mainly of school students rather than university students, but also because the participants took part in the experiment while perceiving that the online E-learning will continue with them until the end of the next semester, as well. This may make them more engaged in the experiment, more serious, and more aware of questionnaire sentences’ meanings.

2.5. Summary

E-learning uses the letter E in its name as an indication of the electronic devices involved in the process; this type of learning has recently started to expand in application, and it achieved mixed results of satisfaction and dissatisfaction in surveys done in many countries like KSA and India.

E-learning can be synchronous -interaction in the same time between students and teacher- or asynchronous -recorded videos for example, no interaction takes place-. E-learning has advantages of low cost, low pollution, and easy access but its disadvantages include lack of social interaction and prevalence of plagiarism and cheating, and even sometimes anxiety towards it.

It is important to know that among the ESL (English as a second language) four skills - speaking, listening, writing and reading- the writing is the most difficult one. ESL writing is among the subjects that can be taught through E-learning and evaluating writing quality is concerned about its cohesion, punctuation, relatedness to subject, and true use of language and it can be evaluated through rubrics like language, grammar, and mechanics. Anxiety towards writing can be one of the factors that hinder students' progress in it.

It is important to consider the extent of applying constructivism in E-learning mode since it means in essence considering the background of the students and the information that they already have and bring to their classes with them. It is also especially important since it considers necessary the involvement of the students in conversations and brainstorming. Constructivism's importance stems from its positive outcomes as a recent method applied in the pedagogical system and producing good results.

Chapter three

Methodology

3.0. Introduction

In this chapter, the researcher is going to detail the method used to extract the results related to the research topic according to the study questions. The researcher will explain exactly the way of obtaining data, analyzing them, and how to draw conclusions. As it will be further elaborated, the method is based on statistical approach as a population is selected (Multidisciplinary Lakiyya High School in the Negev) where a sample is selected voluntarily out of this school to form two equal groups – control and experimental.

The results from the questionnaire were important because all the students have already taken online classes at a certain time during the semester, and it is of great benefit to see if the experiments change their perspective and perception of the E-learning in teaching writing skills. It is worth mentioning that results were gathered, and their means calculated, and the consistency of the results was measured by Cronbach's Alpha, on Microsoft Excel.

3.1. Study Sample

Sample of the students who participated in the study included 18 students in the control group and 18 students in the experimental group. They were all 12th grade students, and they were chosen randomly from the 4 sections in Al-Lakiyya High School which is located in Negev region. Each group has three male students and fifteen females (table 3.1). The identity of the participants was kept hidden for privacy concerns.

Table 3.1: Distribution of participants

Variables	Males	females	total
Control group	3	15	18
Experimental group	3	15	18

Thomas (2020) explains that in experimental design, these two groups are very essential. When there is interest in knowing the impact of some type of treatment or a procedure, participating groups are randomly divided into two main groups:

- Experimental (or treatment) group: the group that receives the treatment to measure the effect of this treatment on this group, to establish study results.
- Control group: Which receives no treatment or no change, or either it receives the regular or standard treatment whose effect is usually known already.

In our experiment, and since researcher needs to see the effectiveness of E-learning in teaching the writing skills to the students, and this means that the E-learning is the independent variable and effectiveness of writing skills education is the dependent variable (along with a few other indicators).

The independent variable will be applied only to the experimental group while the control group will receive a standard treatment (face to face class). This is very useful in recording outcomes and differences, since this makes room for comparison, which is our long-range goal, since the traditional education has been applied for decades now, and it is necessary to compare its effectiveness with the E-learning by comparing the outcomes of both with one another.

As mentioned earlier, the goals of the study were clearly communicated to the participants and they were given choice to participate or not, and to withdraw in any phase of the experiment without justification. The students responded decently and showed complete cooperation and readiness to answer the questions and tests seriously and honestly.

In all the stages, the researched confirmed with the students to clear any piece of information vague or hidden, by elaboration and giving examples. The students participated in the explanatory sessions actively and asked many questions that showed their interest in participation.

It is important to emphasize that students selected were a homogeneous mix of all levels, and this was tested by reviewing their 11th grade scores in English specifically. There was no importance for the gross score because our main concern is the EFL only, not any other course. And according to the feedback given from the students, the distribution was:

Table 3.2: Distribution of the sample that participated with respect to English scores. (Applicable for both groups)

Score Level	Number of Participants	Score Basis Range
High Scores	3	≥ 85
Average Scores	11	70 – 85
Low Scores	4	≤ 70

It was of a great importance to form the participants mainly from average scorers to keep homogeneity in the results, as they form majority.

This chapter summarized the experiment components and procedures in order to enable the reader to understand the discussion basically and in details. Next chapter will contain discussion of the results drawn from the experiment.

3.2. Research Design and Instrumentation

“When you start planning a research project, developing research questions and creating a research design, you will have to make various decisions about the type of research you want to do” (McCombes, 2020, p.1) and categorizes researches in terms of aims and in terms of research data(McCombes, 2020).

In terms of the research aim, this research lies in the category exploratory rather than explanatory, because it explores main aspect of under-researched problems, not a well-defined problem. This is valid because the subject in hand is not general and tied to a region that has been applying E-learning methods only recently, so researcher can consider there is no much depth in the subject material.

However, in terms of research data, from one side, they are a mix of quantitative and qualitative, because even though the main indicators are but numbers (grades, means) but they express qualitative goal (writing skill in studying EFL). From the other side, the paper is experimental rather than descriptive since there is manipulation of variables (E-learning or regular classes) to get a perspective of cause and effect (effectiveness of learning types in teaching writing skills).

As it will be further elaborated in the instrumentation, the data will be collected from:

- Pre-test: Which is writing an opinion essay in a specific topic with length of 120-140 words, the same test was applied to both groups.

- Post-test: Which is also writing an opinion essay in a specific topic with length of 120-140 words, the same test was applied to both groups. And the topic here is different from the topic requested in pre-test.
- Questionnaire / Survey: It contains questions that are related to E-learning specifically and measures variables like students' satisfaction, perception of usefulness, assessment of interaction and communication, and writing skills improvement.

The results drawn from these tools are analyzed as grades of the tests to get average score, and questionnaire answers are analyzed to get means and grand means.

In the following subsections, researcher will link each question of the research questions to a group of indicators.

3.2.1. Experiment Design

To test the capabilities of the education method in delivering the information to the student specifically in the subject of writing skills, a special lecture to be given to the students related to the subject namely.

The students who participated in the experiment were all in the phase of preparing for matriculation exam and welcomed extra information to strengthen their background in English language skills in general and in writing skills specifically.

The English writing material given to them during the semester was reviewed, and it was found to be covering beginner, intermediate and advance skills. To avoid any biases, researcher deliberately avoided using any material from the book, due to the below reasons:

- If material, or part of it, is repeated for the students, this may well influence the accuracy of the results, because the material repeated might have been already clear for the receivers and this will make the lecture given a redundant tool for both groups. This is applicable for old material and even the material yet to come, because some students study in advance.
- To make the material given more related to the topic, which is writing skills in EFL.
- To grab the attention of the students and avoid any boredom.

The material that was given in the lectures was designed to achieve several purposes:

- Remind the students of basic English rules in vocabulary and grammar, like verb tenses and modal verbs as these are main speech components.
- Revise with the students how to write organized, expressive, informative, coherent and related-to-subject paragraph, with examples.
- Revise writing mechanics such as spelling, punctuation, paragraphing and capitalization to make sure that students are aware of how to apply them.

Accordingly, the material prepared for the lectures was taken from:

- Maruf, S. (2014). *Easy-to-Learn English Grammar and Punctuation*. South Carolina, USA. Success Time Publications.
- Williams, A. (2011). *Writing for IELTS*. London, UK. Harper Collins Publishers.

In addition to the above, a list of vocabulary was given to the students, and they were related to the subjects given in writing tasks in exams.

The material chosen was based on the mix of the students who attended the classes, where they were mix of top, medium, and low-grade scorers. Accordingly, the material was a mix of basic, intermediate and advance information to guarantee benefit for all, and grabbing their attention.

It is understood, of course, that this material was lectured in a face-to-face class for the control group and in virtual class conducted via Google Classroom Tool for the experimental group, and during the virtual lecture it was confirmed if voice and image are clear with the students.

This study took place in the second semester of the academic year 2020-2021. The targeted students were given writing assignments twice a week. They had the opportunity to submit their assignments for a maximum of two days to collect their ideas and write about them in a clear way. The main focus of the lessons was the strategies used for writing an opinion essay. The entire experience went through three successive phases that were shown as follows.

3.2.2. The Introductory Stage

A meeting was held for the experimental group via zoom application to explain the objectives and requirements of the study. It was explained to the students that the goal of this experiment is only for academic purposes. In addition, participants were informed that participation in this study is a part of the curriculum and the classes assigned to them. Accordingly, the results of their achievements would be counted as part of the mark that they would obtain in the mock exam. Also, delivering the tasks on time was emphasized.

Although students have a previous knowledge of how to use google classroom application, the researcher gave students the main instructions that are valuable to deal with it in learning writing. It is worth mentioning that the school registered students with this application and explained to

them how to use it as an alternative educational method for face-to-face education during the period of COVID-19. Moreover, in this stage students had done the pre-test and filled out the first questionnaire.

3.2.3. The Experimental Stage

At this stage, students in the experimental group were contacted remotely, due to the schools' closure because of the rapid spread of the Covid-19 virus. Students were contacted through zoom, Google Classroom and WhatsApp applications in order to closely follow their performance step-by-step and to ensure that they are fully completed the tasks. Also, it enabled them to ask the teacher about any obstacle they might have faced in addition to giving them the opportunity to interact and work with other students.

The integration of WhatsApp and Google Classroom platforms was considered because they are the two educational tools that were adopted in schools in addition to Zoom as alternatives for face-to-face learning. Also, students had gained enough experience and skills in using them since the closure of schools during the Corona period.

3.2.4. Post-experiment stage

At this stage, another meeting for the experimental group was held with the aim of knowing the detailed effects of e-learning on their ability to write in a clear and appropriate manner. Moreover, the experimental group students took the post-test and filled out the second questionnaire to track the benefits obtained through distance learning and their writing development.

Before getting the questionnaire filled, the term ‘anxiety’ specifically was explained thoroughly to the students as it is considered new and unfamiliar to people outside the first world countries.

The following subsection contains more details about tests and questionnaire with their link to thesis questions and hypotheses.

3.3. Pre-test and Post-test

In order to measure the skills of the students, two straightforward pure writing tasks were given to them. Researcher adhered to the fact that any mixed purpose questions would not be fully indicative or conclusive in measuring writing, where writing is a descriptive and narrative skill, and cannot be limited to questions like ‘fill in the blanks or multiple choice’ which can be easily answered by luck or by cheating.

The same pre-test was given to both control and experimental groups prior to the lecture, and the same applied for the post-test which was given after the lecture. Tests can be easily considered the most effective assessment tool to help teachers locate the weaknesses and strengths of students related to the targeted skill which is writing in the current study. Moreover, it helps teachers draw a comprehensive map to track students' development in all domains during the whole educational year.

Objectives of the tests:

- 1- Detecting students' weaknesses and strengths in writing skills.
- 2- Ensure that students are able to plan to write a topic.

3- Ensure that students have made use of digital tools in learning in order to avoid spelling errors.
(For experimental group)

4- Ensure that students have sufficient capacity to apply thinking and analytical skills in writing an argumentative essay.

5- Recognizing effect of virtual classes in improving students' writing. (For experimental group)

Dependently, pre/posttests were chosen to determine students' level and development in writing before and after using Google Classroom as an interactive tool to teach writing skills. Students were asked to write an opinion essay to examine their capability to develop their own argument. This task demands students to have high thinking skills and ability to employ all the language skills in one task.

The tests were evaluated according to the rubrics given by the Ministry of Education. Students were allowed to use the word processor applications which are available with them. They were also able to use different resources to gain information required for their essays.

Table 3.1: Rubrics used in assessing writing tasks.

Criteria and Scores	Description
Content and Organization 8 points	<ul style="list-style-type: none">• On topic• Fully developed (main idea and supporting details)• All elements of task are addressed• Information is relevant• Content is understood• Task is well-organized and coherent

<p>Vocabulary</p> <p>10 points</p>	<ul style="list-style-type: none"> • Correct use of varied and rich vocabulary • Appropriate use of instances of language chunks and phrases • Correct use of connecting words or phrases • Use of appropriate register
<p>Language</p> <p>16 points</p>	<ul style="list-style-type: none"> • Correct use of basic tenses and/or language structures • Correct use of advanced language structures • Correct word order • Correct use of parts of speech, pronouns and prepositions
<p>Mechanics</p> <p>6 points</p>	<p>Correct use of:</p> <ul style="list-style-type: none"> • Spelling • Punctuation • Capitalization • Paragraphing • No run-on sentences
<p>Total 40 points</p>	

The pre-test was designed in a way that the paragraph written does not need much vocabulary, depending on the knowledge stored already prior to the test in students' brains. The question was:

“Students have various opinions as to which is the most important school subject. What is the most important subject that you study at school? Write a composition stating and explaining your opinion.”

Twelve lines were given to fill the answer which means the requested text was 120 – 140 words. The above rubrics were applied in checking the exam.

As for the post-test which followed the lecture for both groups, it was:

“Write 120 – 140 words in English on the following topic: From what age should children be allowed to have their own cellphones? Write a composition stating and explaining your opinion.”

As expected, researcher will have to link the instrumentation and measurement tools to the research questions and see which measures what. Among the five research questions, the pre- and post-tests take part in answering and evaluating the first and fifth questions:

Research question 1: Are there statistically significant differences in the experimental students’ writing achievement before and after the experiment? This question specifically can be evaluated by comparing the average of the marks of pre- and post-tests for both groups. Comparing the means of the pre-tests will give us a clear view of the base point on which researcher has to rely in order to perform the assessment, and it will confirm us the real level of the students who participated compared to each other.

Average of the gross result will be taken for both post-tests, it is of great importance to emphasize that the main concern is not the comparison of the absolute values of averages of post-tests’ results, but it is rather the comparison of degree of improvement i.e., it is a comparison between both differences in respective means (difference between test means of control group compared to difference between test means of experimental group).

The rubrics used for measuring the students' skills are 4 rubrics, 4 means of separate rubric results of the control group and experimental group will be evaluated for the pre-test then for the post-test, and then these 4 means will be compared (each one separately).

Ritter (2010) mentions that “It is important to explore score reliability in virtually all studies, because tests are not reliable.” He also discusses the misconceptions people have regarding this coefficient and one of these is that it is thought this coefficient is characteristic of measurement tool (test or survey) while it is actually a measurement tool of the scores that yield from the test. Spearman (1904) determined reliability through consistency of scores across measurement forms. If consistency is witnessed within results then test results are reliable, and vice versa.

Taber (2018) explains how to employ Cronbach's alpha and this is expressed in the below table:

Table 3.2: Cronbach's alpha value indications.

Alpha value	Reliability score
≥ 0.9	Excellent
0.8 – 0.9	Very Good
0.7 – 0.8	Respectable
0.65 – 0.7	Minimally Acceptable
0.6 – 0.65	Undesirable
< 0.6	Unacceptable

The researcher will apply the equation of Cronbach's alpha to evaluate the consistency of the results. It is worth mentioning that Cronbach's alpha measures the consistency of the tests results,

not the consistency of the test, emphasizing that the results are consistent, related, and measure the same thing. The below table summarizes the value of Cronbach's alpha for tests.

Table 3.3: Cronbach's α for pre/post-tests with their reliability scores.

Tool	Cronbach's α	Reliability score
Pre-test (Control Group)	0.77	Respectable
Post-test (Control Group)	0.86	Very Good
Pre-test (Experiment Group)	0.82	Very Good
Post-test (Experiment Group)	0.81	Very Good

It is not usual for researchers to measure the consistency coefficient, Cronbach's α , for the exam having different questions with different weight for each one, but it is fair to emphasize the consistency of the test, as well as the questionnaires.

We can notice that the consistency for the tests is not only higher than that of the tests, but it is also very high. That is due to the fact that each question has the same set of possibilities of an answer (1-5), and this participated significantly in raising the consistency of the results. As for the tests, the marks given indicated different weightage for each discipline, and this decreased the consistency of the test results; this was relatively clear in pre-test for the control group, since the results did not only indicate different weightage, but the numbers indicating the results were more scattered than the numbers found in other tests.

3.3. Questionnaire

To answer the remaining thesis questions, a questionnaire was designed to answer the questions related to the objectives and hypotheses of the study. Below is the questionnaire used with the

students followed by elaboration of every criterion. As noticed, the survey follows type of statements (Agree/ Disagree scale), which are in fact stative sentences or statements.

The draft of the questionnaire was collected from two resources which are: 1-a survey conducted by Muslimah (2018) which aimed to check students' response about "using Google classroom as an online platform to learn English in the Islamic University of Indonesia". 2- <https://www.marquette.edu/oie/documents/ESLP82QuestionnaireFa08.pdf> this survey consists of 106 items that investigate students' self-assessment of writing skills before, during and after a written task.

The survey was modified twice depending on the advice given by one lecturer from the English Department at Hebron University and one from the Faculty of Education at Hebron University. They advised to omit the unnecessary statements that don't make any sense and to narrow down the duplicated ones. The final form of the survey consisted of two parts one is the demographic information which is three questions deal with students' gender, their previous experience of using online learning and the accesses to internet. All the items are closed ended questions.

Table 3.4: The demographic information about the participants.

GENERAL DEMOGRAPHIC	
<i>tick (✓) each of the items below</i>	
Gender: Female -----	Male-----
Have you ever participated in any type of e-learning before the pandemic?	
___ Yes	___ No
Do you have an internet connection at home?	
___ Yes	___ No

The other part consisted of 34 questions divided under four categories. The first set of questions is five and aims to answer the research question 3 which is related to easiness (see table 3.5).

Table 3.5: Statements that examine the ease of access to online applications.

No	Statement	SA	A	N	DA	SDA
	EASE OF ACCESS					
1	I can sign to Google Classroom easily					
2	I can access lesson materials easily					
3	I can send and receive assignments easily					
4	I can submit assignments easily					
5	I can navigate the system easily					

The first statement "I can sign to Google Classroom easily" measures how easy using Google Classroom is, by testing the first step in any class which is the sign-in. Whereas the second one, "I can access lesson materials easily" related to the next step applied by the students after the sign-in, since access to online courses needs knowledge about the application interface and awareness of multiplicity of options offered by the app.

The fourth statement "I can send and receive assignments easily" as part of asynchronous online learning, assignments and homework are essential part for strengthening the research skills. Google Classroom provides a separate portal for these assignments to be sent by instructors and students (after doing). This statement tests how easy this process is.

"I can submit assignments easily" this part is related to the assignments that need synchronous interaction with the interface like online quizzes and assignments with stopwatch for submission. This statement tests how students find this.

Finally, "I can navigate the system easily" is a generalized statement to see how students can move from one option to another, and how confusing or non-confusing the system is with its multiple components.

The second section, the statements 6-10, comes to answer the research question 2 which is related to usefulness as perceived by students (see table 3.6).

Table 3.6: Statements that examine the perceived usefulness from the online applications.

	Perceived Usefulness
6	Methods of teaching in Online learning are excellent
7	Online learning helps me to submit assignments on time
8	The course activities help to examine issues, to evaluate new ideas, and to apply what has been learned.
9	The e-feedback provided by the lecturer is useful
10	The subject objective, assessment and content are consistent with the aid of Google Classroom

Statement 6 "Methods of teaching in Online learning are excellent" measures if the students are really satisfied with the new way of teaching. Whereas the seventh one "Online learning helps me to submit assignments on time" inspects if there is any progress achieved in the direction of saving time in doing the assignments, especially that online methods are presumed accessible from anywhere.

In addition, statement 8 "The course activities help to examine issues, to evaluate new ideas, and to apply what has been learned" as linked to constructive classrooms, the face-to-face classes and even the curricula had been designed in the past few years in a way that serves interaction; this is clear from mere review of the materials proposed. As this process has been developed significantly by training programs and sessions offered by authorities, it is important to check if the online platforms provide the same interaction offered by face-to-face classes.

The ninth statement "The e-feedback provided by the lecturer is useful" comes to measure the satisfaction of the students over the evaluative and interactive tools used by the teachers in the online platforms to inform the students about their level of progress.

It is important to check if the students assess themselves as beneficiaries of the courses given through online platforms, and if they believe that the content given to them through Google Classroom is understood in a way that serves these objectives. Thus, the last statement "The subject objective, assessment and content are consistent with the aid of Google Classroom" was designed.

However, the statements 11-15 aim to answer the research question 3 which is related to communication and interaction (see table 3.7).

Table 3.7: Statements that examine the communication and interaction.

	Communication and Interaction					
11	Online learning is an excellent medium for social interaction					
12	Lecturers keep course participants engaged and in productive discussion.					
13	Interacting with other participants is comfortable regarding writing activities.					
14	Lecturers are more enthusiastic in teaching while explaining via the online technology tools.					
15	Lecturers are friendly and approachable.					

11- Online learning is an excellent medium for social interaction: Since face-to-face classes provide physical interaction and a chance for discussions among the class, which is really useful in the pedagogical process -especially from constructive perspective- then it is important to check if the online learning provides similar benefits.

12- Lecturers keep course participants engaged and in productive discussion: Again, as suggested by constructivism, lecturers must give chance to students to participate in discussions. It is important to see if online learning allows for the same.

13- Interacting with other participants is comfortable regarding writing activities: This statement is more specific in inspecting the students' satisfaction about interaction in the classes with regards to the writing skills, especially that writing skill itself is not interactive like listening and speaking. So, it is important to see if the pedagogical interaction in the classes allows for benefits in learning writing as perceived by students.

14- Lecturers are more enthusiastic in teaching while explaining via the online technology tools: Online learning can induce boredom or lack of physical touch provided by face-to-face classes. This might lead to reduce the zeal or interest in educational process from the teachers' point of view. This statement checks if the students feel any difference.

15- Lecturers are friendly and approachable: Online learning might weaken the human bondage by virtualizing the educational process and making it totally software-based. This might affect how teachers are close to the students and how easy it is to deal with them.

The statements 16-21 aim to answer the research question 2 which is related to satisfaction.

(see table 3.8).

Table 3.8 Statements that examine students’ satisfaction about online learning.

	Students’ Satisfaction					
16	The subject meets my personal aims through the technology tools used through online learning.					
17	I would recommend this mode of learning to be applied to the other appropriate subject.					
18	Google classroom would be my first choice in active learning compared to other methods.					
19	Online learning is an interesting platform to learn writing.					
20	The time of the lessons and its duration is suitable.					
21	The quality of learning writing activity is excellent.					

16- The subject meets my personal aims through the technology tools used through online learning: This statement is specifically about the goals set by students themselves; it is essential to see the perception of students with regards to their personal aspirations.

17- I would recommend this mode of learning to be applied to the other appropriate subject: Nothing is sincere in measuring the satisfaction level more than checking if the students want this method to be applied in other courses or no. This statement aims to check if they recommend online learning in general.

18- Google classroom would be my first choice in active learning compared to other methods: Again, this statement paves the way for preferences to be flagged out; as it checks if the students really would rather learn by online courses rather than learn by face-to-face classes.

19- Online learning is an interesting platform to learn writing: It will be useful to go beyond satisfaction and see if the students view online learning as interesting tool. Constructive learning emphasizes this always to distinguish itself from traditional learning which tends to be more rigid. It has become a necessity to arouse the attention and interest of the students to make them care about their classes.

20- The time of the lessons and their duration are suitable: Since online learning takes place mostly at homes, there was no fixed timing for the classes and the timings varied according to many circumstances related to the pandemic lockdowns. Accordingly, the durations varies where some classes were longer than others to compensate. This statement double checks if the students are OK with all procedures done.

21- The quality of learning writing activity is excellent: This measures students' satisfaction for the skills of writing they acquired from E-learning.

Finally, the fifth section, the statements 22-34, aims to answer the research question 4 which is related to technology role in improving the writing skills. Their grand average will express the result(see table 3.9).

Table 3.9: Statements that examine the areas of improvement in students' writing.

	Improvement in writing					
22	Technologies used in online learning help me successfully use internet search engines to locate information to support my ideas.					
23	Technologies used in online learning help me write a good introduction for an English essay.					
24	Technologies used in online learning help me write a good conclusion for an English essay.					
25	Technologies used in online learning help me use a word processing program to type and format my essays in English.					
26	Technologies used in online learning help me effectively brainstorm to gather ideas before writing.					
27	Technologies used in online learning help me write a well-organized and developed outline.					
28	Technologies used in online learning help me revise the development and organization of my own writing.					
29	Technologies used in online learning help me develop my grammar.					
30	Technologies used in online learning help me develop my punctuation.					
31	Technologies used in online learning help me develop my spelling.					
32	Technologies used in online learning help me develop my vocabulary.					
33	Technologies used in online learning help me to effectively write under time constraints.					
34	Technologies used in online learning help me identify and correct writing errors.					

- 22- Technologies used in online learning help me successfully use internet search engines to locate information to support my ideas: This statement seeks assurance of students' ability to use search engines (like Google) to find extra materials and information pertinent to their study curricula.
- 23- Technologies used in online learning help me write a good introduction for an English essay: a list of specific statements starts with this one. Writing is a hierarchical process, composed of many parts that build upon each other. This sentence, for example, starts with confirming the students' ability to open for an essay by writing good introduction.
- 24- Technologies used in online learning help me write a good conclusion for an English essay: This statement speaks about skills earned by students through E-learning in writing the final part of essay or study which usually contains deductions and recommendations.
- 25- Technologies used in online learning help me use a word processing program to type and format my essays in English: This point was explained thoroughly to the students, since word processing programs are many, but the most important ones and the ones used in the Middle East are the Microsoft programs, especially Word and PowerPoint. This statement, since assignments must be mostly done using these programs, checks if the students can use these programs properly or no.
- 26- Technologies used in online learning help me effectively brainstorm to gather ideas before writing: This point specifically was explained to the students by explaining to them the strong relationship between effective brainstorming and student's knowledge about subject under research. Brainstorming about any subject can be strengthened only by continuous research and by continuous discussions (as proposed by constructivists); the first point is presumably available since online search engines assist students in expanded search for

many topics, and the second one is linked to effectiveness of E-learning in supporting discussions and group work.

27- Technologies used in online learning help me write a well-organized and developed outline: This point is about students' self-assessment in the areas of cohesion and punctuation in writing.

28- Technologies used in online learning help me revise the development and organization of my own writing: This is about continual improvement of student's skills in writing and his/her ability to assess himself and effect adjustments.

29- Technologies used in online learning help me develop my grammar: It is inevitable to understand grammar in order to write a good essay or deal in English in general. This statement checks if students form good understanding of English grammar and employ it properly in their writing.

30- Technologies used in online learning help me develop my punctuation: This statement checks if student believe they know how to use different punctuation items like comma, hyphen, apostrophe, full stop. . . etc. and if they learn it properly by online classes.

31- Technologies used in online learning help me develop my spelling: This discipline is linked to vocabulary learning. Spelling cannot be correct unless the student has stored and accumulated vocabulary correctly in mind. This checks if online learning achieves this.

32- Technologies used in online learning help me develop my vocabulary: This check if the online learning is a memory-stimulating tool, and if it can really help students remember different words with their meanings and functions.

33- Technologies used in online learning help me to effectively write under time constraints: Since online exams are strictly timed, and the online learning focuses on developing search

skills, it is of great benefit to measure how such procedures help in enabling students to write when time is finite.

34- Technologies used in online learning help me identify and correct writing errors: This point is again about self-assessment in the discipline of writing, and it combines all areas of knowledge needed to write like vocabulary, grammar, punctuation. . . etc.

As it has done for the tests, the reliability of the surveys was calculated using Cronbach Alpha Coefficient and measured as shown in the following table:

Table 3.10: Cronbach's α for the questionnaires with their reliability scores.

Tool	Cronbach's α	Reliability score
Pre-Survey (Experiment Group)	0.96	Excellent
Post-Survey (Experiment Group)	0.99	Excellent

3.4. Research Methodology and Data Analysis

The data was obtained by applying a general questionnaire to subject of the research. The points raised within the questionnaire are directly related to the topic in terms of satisfaction, development, preferences, anxiety, and technical difficulties.

Moreover, the two groups received lectures from the researcher in writing skills and vocabulary (related to test) in both methods (face-to-face method for control group and online lecture for experimental group). Prior to the lecture, a pre-test was given to both groups, and after it they all received post-test to measure their learning curve and performance and to what extent they benefitted from the lecture in each method.

The results from the questionnaire played a pivotal role in informing the outcome of the research because all the students have already taken online classes at a certain time during the semester, and it is of great benefit to see if the experiments change their perspective and perception of the E-learning in teaching writing skills.

Data were collected and analyzed by analyzing questionnaire, writing composition tests scores, and the demographic data. By using the Statistical Package for Social Sciences (SPSS) program, the pre/post tests and both questionnaire result were compared of the experimental and control groups statistically. Moreover, mean scores were used to report the results of Likert-type statements for the student questionnaire and the internal consistency for them are found using Cronbach's alpha.

3.5. Summary

The main method followed in evaluating the results depends mainly on tests and questionnaires. The study sample is 36 students divided into two groups, each one is formed of 18 students who are distributed according to their academic achievement in similarity to the distribution of any typical class, with majority (11 students) as average students, and the rest are mix of low scorers and high scorers. The two groups are called control group and experimental group.

As for the instrumentation applied to each group, the control group was given a regular face-to-face lecture that covered many aspects in ESL writing including the rubrics measured in the test: content and organization, language, vocabulary, and mechanics. The lecture also covered revision of grammar and ESL basics. This group was given a pre-test (before lecture) and a post-test (after lecture). The rubrics are measured, and their averages were found for this group.

As for the experimental group, it was given an online lecture using Microsoft teams which covered the same topics given to the control group. Similarly, this group was given a pre-test and post-test to measure the same rubrics. The rubrics are measured as well and their averages are evaluated.

The first step was to compare the progress achieved by each group in each rubric, and finding which group achieved more progress to evaluate how pedagogically suitable each method is. The experimental group was given a questionnaire, with answers selected by students varying between strongly disagree to strongly agree, from 1-5. The questionnaire covered characteristics of E-learning, including ease of access, perceived usefulness, communication and interaction, students' satisfaction, and improvement in writing.

The average for each answer is evaluated, and the grand mean is evaluated for each area to test how pedagogically suitable this method is. For all instruments, pre-tests, post-tests, and questionnaires; their internal consistency is found using Cronbach's alpha, and all were found satisfactory.

Chapter four

Findings and Discussion of the Results

4.0. Introduction

In this chapter, the researcher is going to review the results drawn from all the research tools described in chapter three. Although the review can be elaborated on extensively, the researcher will be succinct and pithy in presenting the findings in order to allow accessibility of this information to a wider, and probably less specialized, audience.

As explained in the methodology, the control group and experiment group -which both consisted of 18 students having the same level distribution- both took pre- and post- exams. What is important here is the amount of progress achieved by each group, not the initial or final results. The final results and the average of each individual question will be taken for the purpose of comparison.

The relevance of the questionnaires to the research topic and research issues was explained in chapter 3, and clarification was provided on how each hypothesis will be demonstrated right or wrong using the results of the questions' answers.

In this chapter, the researcher will use chapter 3 as a road map for guidance in finding the results and commenting on them. It is worth highlighting again that the each 18-student group contained majorly 11 students with average scores in English language in 11th grade, 4 students with low scores, and 3 students with high scores as explained.

In this chapter, the main tool that was used for the analysis of data is Microsoft Excel, where it was used for calculating Cronbach’s alpha, means, grand means, and standard deviation. It was used for producing relevant graphs and charts as well to present information.

4.1. Pre and Post Tests

4.1.1. Control Group Results

In this section, the researcher will link the instrumentation and measurement tools to the research questions to come up with clear results. The pre and post-tests will answer and evaluate the first and fourth questions: Are there statistically significant differences in the experimental students’ writing achievement before and after the experiment and Do the students believe that there are specific writing skills that have been influenced specifically compared to other ones?

The results of the writing pre-test that was given to the control group were processed using excel and the researcher obtained the below values:

Table 4.1: Mean and standard deviation of the mean for the pre-test of the control group.

Measured Value	Mean	Std. Deviation
Content (8 marks)	3.61	1.20
Vocabulary (10 marks)	4.44	1.34
Language (16 marks)	6.78	2.39
Mechanics (6 marks)	4.06	1.59
Total (40 marks)	18.89	5.20

From the above results, the researcher can deduce many clues about the control group that participated in the test: First, the group participants are pretty weak or in other words, incompetent, in the field of English writing, where achieving an average of less than half of the total mark (M= 18.89 out of 40) indicated low skills in the field. Second, the only rubric that received fairly acceptable average is the rubric of mechanics (M=4.06 out of 6) but the language rubric indicating grammar and order exhibits deep weakness in the levels of the students (M=6.78 out of 16).

In general, standard deviation indicates the average of how much individual values deviate from the average, and the values extracted are not very big, and this means scattering from the mean is not big.

After receiving the face-to-face lecture, the control group took the post-test, and the results of this test are exhibited in the below table:

Table 4.2: Mean and standard deviation of the mean for the post-test of the control group.

Measured Value	Mean	Std. Deviation
Content (8 marks)	4.22	1.40
Vocabulary (10 marks)	4.83	1.58
Language (16 marks)	8.06	2.86
Mechanics (6 marks)	4.67	0.77
Total (40 marks)	21.78	6.10

Judging from a constructive point of view, the researcher can say that the participants didn't work hard in the subject of writing in the previous years. Keeping in mind that one lecture can't give them a huge boost, but the students still exhibit a low progress and low base. Anyway, the

good news is that they achieved a progress, and the mean was pushed to achieve more than half of the full mark (M=21.78 out of 40). Not only this, the same happened to the language rubric which really had significantly low results in the pre-tests (M= 6.78 out of 16) and increased in the post-test to be (M=8.6 out of 16).

Table 4.3: Progress and progress percentage achieved by control group.

Measured Value	Progress	Progress Percentage
Content (8 marks)	0.61	7.63%
Vocabulary (10 marks)	0.39	3.9%
Language (16 marks)	1.28	8%
Mechanics (6 marks)	0.61	10.17%
Total (40 marks)	2.89	7.23%

Table 4.3 shows how much progress is achieved in each rubric; the percentage is obtained by giving the progress over the weight of the rubric itself. It is noticed that the progress achieved ranges from around 4 – 10%. Although the group of the participants exhibited weakness in the writing skills but achieving such progress by merely reviewing writing skills and grammar with them is really good.

4.1.2. Experiment Group Results

The results of the writing pre-test that was given to the experiment group were processed using excel and the researcher obtained the below values:

Table 4.4: Mean and std. deviation of the mean for the pre-test of the experiment group.

Measured Value	Mean	Std. Deviation
Content (8 marks)	4.11	1.84
Vocabulary (10 marks)	5.17	1.25
Language (16 marks)	8.06	3.30
Mechanics (6 marks)	3.44	0.86
Total (40 marks)	20.78	6.56

As for the participants in the online learning session of the experiment group, the above represents base information for their level and performance in the writing skills area. Now it is clear that they are better in this than the participants of the control group (M=20.78 out of 40), but still, they exhibit a really weak level of writing skills.

So far, all the standard deviations show little scatter from the mean but that is fine. For this group it will grab the eye that the rubrics and the total average all achieved more than half of the weight of each rubric, and this is a good indicator for this group.

This group received the online E-learning lectures through Google Classroom and zoom platforms, and after taking these lectures a post-test was given. The results are in the table below:

Table 4.5: Mean and std. deviation of the mean for the post-test of the experiment group.

Measured Value	Mean	Std. Deviation
Content (8 marks)	4.94	1.70
Vocabulary (10 marks)	6.06	2.04
Language (16 marks)	9.28	4.17
Mechanics (6 marks)	4.50	1.10
Total (40 marks)	24.78	8.07

The above are the results of the post-exam for the experiment group, and it is clear they achieved a progress relative to the results of pre-exam. The real picture can be extracted from measuring the differences and the progress percentage.

Table 4.6: Progress and progress percentage achieved by experiment group.

Measured Value	Progress	Progress Percentage
Content (8 marks)	0.83	10.38%
Vocabulary (10 marks)	0.89	8.90%
Language (16 marks)	1.22	7.63%
Mechanics (6 marks)	1.06	17.67%
Total (40 marks)	4.00	10%

Having received the above, the reader can judge that the progress percentage is really good, and this gives us the chance to compare the progress percentages between conventional f-t-f learning of control group and E-learning of experiment group.

Looking at the results of the students in the pre- and post-exams of the experimental group, and reviewing the trends of development of them, the researcher deduced the following:

- There is a general weakness in the areas of content and vocabulary, and this is reflected by the fact that there is a significant marks' cut due to the shortage of essays requested, which can be interpreted into weakness in these two rubrics.
- Most development took place in the first rank in the same two aforementioned rubrics: content and vocabulary. This in fact indicates good interaction and attention paid from the students to the online class and to the new concepts and writing techniques discussed in the same.
- Development in language comes second in intensity, where there was no much significant progress in this area, and this can be attributed to the fact that language rubric is a measure of the 'rules part' of the writing, so to speak, and English language in general. It is not easy to develop this part through one online class, and to measure this rubric specifically, a series of online classes are recommended.
- Mechanics take the last rank in showing progress, not because the students didn't improve in them significantly, but because most students exhibited stability in their skill in this rubric.
- One of the students exhibited complete decline in all four rubrics.

As for the rubrics and how students developed in them, they are as follows:

- In the content rubric, two students exhibited a decline, two exhibited stability (no change), and the remaining exhibited improvement, out of which two developed slightly.
- In the vocabulary rubric, two students exhibited a decline, four didn't experience any change, and seven students developed significantly.

- In the language rubric, four students exhibited decline, two did not show any change, and the remaining seven exhibited development in their marks, out of which two showed slight improvement only.
- In the mechanics rubric, three students exhibited decline in their marks, four stayed the same, and seven students made improvements.

Taking student C as a sample to demonstrate the progress, the below notes can be found in his pre- and post- exams, and starting with the pre-exam:

- The ideas intended to be exhibited are deep, in fact. The student chose the math as the most important and ‘best’ subject at school. The content is given mark 5 because the information mentioned is relevant to the topic, there is a good degree of coherence in flowing from admitting its importance because it is ‘requested’ in many jobs to the fact that he knows that he is weak in math, but he still has the opinion it is the most important. There is repetition in the answer (the fact that math is ‘requested’ in the job market).
- As for vocabulary, his level is pretty above average since he used expressions like ‘from my point of view’ and ‘I’m not that good’. Vocabulary used is not advanced, but enough to deliver the idea, with some weak and uncommon expressions like ‘requested’ instead of ‘demanded’, which may have resulted from literal translation. 12 marks were deducted due to shortage of words requested in the question text, and these can be considered mainly as weakness in the rubrics of content and vocabulary.
- In language rubric, the student is also above average, but he tends to avoid advanced language structures. The student used ‘present simple’ mainly, and there were no major mistakes in pronouns, verb tenses, word order, or language structure generally. But because of the shortage of the text, it was considered as insufficient evidence for his skill.

- In mechanics, the student has some weakness in paragraphing, and uses run-on sentences sometimes, without dividing them into parts (like the opening paragraph).

As for this student's level in the post-exam, it is evidenced that:

- In content rubric, he exhibited real improvement as he moved smoothly between the ideas, by opening with a paragraph stating that mobile phones have pros and cons, and then mentioning his opinion about providing them to the teens, with elaborative narration of reasons. The conclusion was a statement directed to parents, and that is good to end with.
- In vocabulary, he used pretty advanced words like 'pros and cons', 'literally', 'seduced' and 'neglected'. Instances were clear and well delivered, connecting words like 'first' and 'in addition' were used correctly.
- In language, the student made more complex sentences with correct grammar and word order, and language use seemed significantly smoother and nicer.
- In mechanics, he achieved good progress in paragraphing specifically, where he divided the subject into an introduction with a hook, two body paragraphs, and a conclusion. Spelling and punctuation were really good.

4.1.3. Control Group vs Experimental Group

The following table explain the differences between the control and the experimental group achievement in the different areas of writing skills.

Table 4.7: Comparison between progress percentage of control and experiment groups.

Measured Value	Progress Percentage (Control)	Progress Percentage (Experiment)
Content (8 marks)	7.63%	10.38%
Vocabulary (10 marks)	3.9%	8.90%
Language (16 marks)	8%	7.63%
Mechanics (6 marks)	10.17%	17.67%
Total (40 marks)	7.23%	10%

Based on the aforementioned data, we can see that experimental group achieved not only higher scores, but also higher progress. It is only in language rubric that the control group achieved slightly higher progress. The results are reflected in the below bar chart:

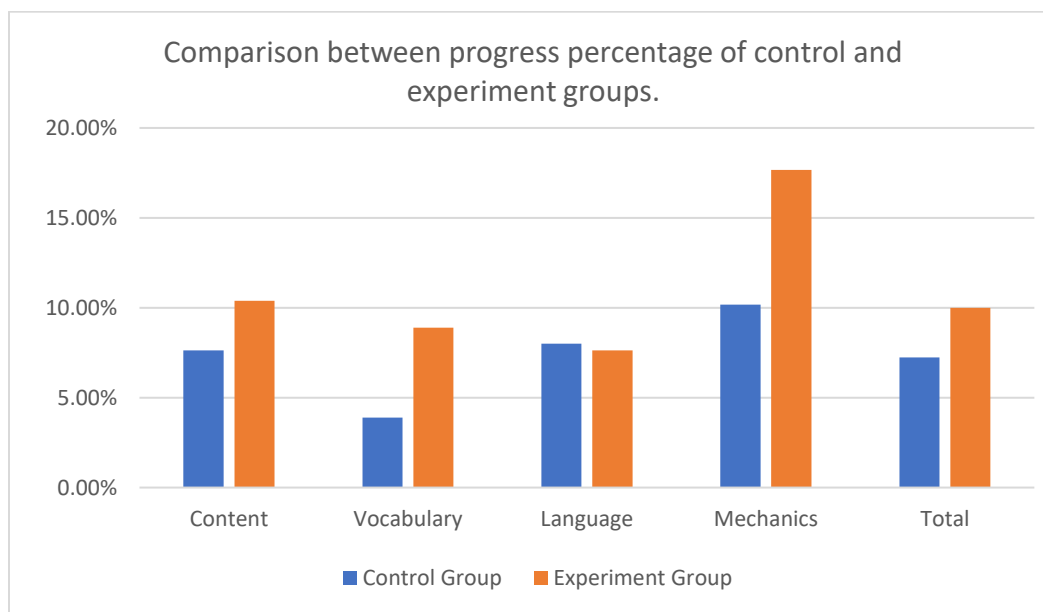


Chart 4.1: Bar representation of table 4.7.

As discussed in chapter 3, the above data are related research questions 4 & 5 as below:

- Research Question 4: Answer is yes; as the students applied writing skills fairly well and proved better performance both relative to the pre-test and relative to the performance of the control group.
- Research Question 5: The answer is no, to a far extent. It is shown that language rubric didn't achieve progress under the E-learning mode. In fact, it reverted back. Judging on this, language possesses the biggest marks weight among all others and the researcher can interpret this from a constructive angle: the fact that this field is linked to the grammar means that it must have a strong basis to launch from; this is the essence of the language in fact and it is connected to all EFL skills, and mostly the students had a significant weakness in it in a way that can't be amended easily.

Comparing the results of this thesis to those of 'The Effectiveness of Using Google Classroom Application to Teach Writing Skill' by Hafidh Ahsan, it can be found that he supports the results found here stating that online learning is more effective than conventional or f-t-f learning. The thesis writer performed the experiment of the pre- and post-tests on the students of 11th grade in an Indonesian school; the sample consisted of randomly selected 30 students each (Ahsan, 2019).

The researcher found the mean, median, and mode among of which the most indicative is the mean of course so it is the one reviewed here. For the experimental group the mean is 42.3% in the pre-test and 68.4% in the post-test, while the control group achieved mean of 34.7% in the pre-test and 49.7% in the post-test (Ahsan, 2019).

The researcher of this thesis commented on the final results (those of post-tests) and didn't mention a comparison of the progress achieved. He attributed this good performance to the fact that the students had enjoyed their online class and felt more relaxed, in contrast to those in control group who felt bored (Ahsan, 2019).

The results are generally true even if the basis was not complete. Here it can be seen that the progress achieved by control group in that thesis was 15% and by experimental group was 26.1%. This supports the result found in this thesis with an even bigger number. It is noticed that the researcher didn't include any detailing of the rubrics like language and mechanics in the results, although mentioned in the methodology.

4.2. Pre and Post Surveys

In the following subsections, the researcher will review a comparison between experiment group attitudes in the pre- and post-surveys by reviewing the results related to each research questions assigned to them. This section will answer the research questions two and three: Are there statistically significant differences in the students' attitude toward the online e-learning regarding to perceived usefulness and satisfaction? and Do the students view E-learning methods as easy to use and its tools are suitable for interaction and communication with teachers and other students?

4.2.1 Ease of Access

In this section, the researcher will review the comparison between pre- and post-surveys for the first 5 questions. These questions discuss how easy using Google Classroom is from the students' perspective. This question is not related to writing skills specifically, but related to the online learning tools in general, as it measures if the students can really use these tools or no, and if they need further training in them or no. The average for each question is taken, and then grand average is calculated.

It is worth mentioning that for this group of questions, less score means leaning to agreement, and bigger score means leaning to disagreement with the statements that all expressed easiness of the Google Classroom.

Table 4.8: Comparison between students' attitudes regarding easiness of E-learning.

Question	Pre-survey AVG	Post-survey AVG	Points Difference	Std. Deviation (Pre-test)	Std. Deviation (Post-test)
Q1	2.67	1.61	-1.06	1.19	0.92
Q2	2.78	1.72	-1.06	1.44	0.83
Q3	3	1.61	-1.39	1.41	0.78
Q4	3	1.83	-1.17	1.41	0.51
Q5	2.89	1.78	-1.11	1.45	0.55
Grand	2.87	1.71	-1.16	0.14	0.10

As indicated earlier, the less the score is, the more the agreement. Neutral answers revolve around the value 3. From the above table, the researcher can deduce the following:

- The results of the pre-test including the grand average indicate approximately neutral position, with students split in half regarding the judgement of the E-learning easiness. There is a slight leaning to agreement with the face that it is easy since the grand average is 2.87 (slightly less than 3).
- Redirection of the opinions towards agreement is not the same in all points. The biggest difference in redirection to the agreement happened in Q3; this can be attributed to what

students noticed after submitting pre- and post- test. Least difference is noticed in Q1 and Q2 which tend to be basic points related to the mere access to the app. Q4 and Q5 come in the middle as navigation of the system happened during the lecture, and the students finished their tests prior to survey.

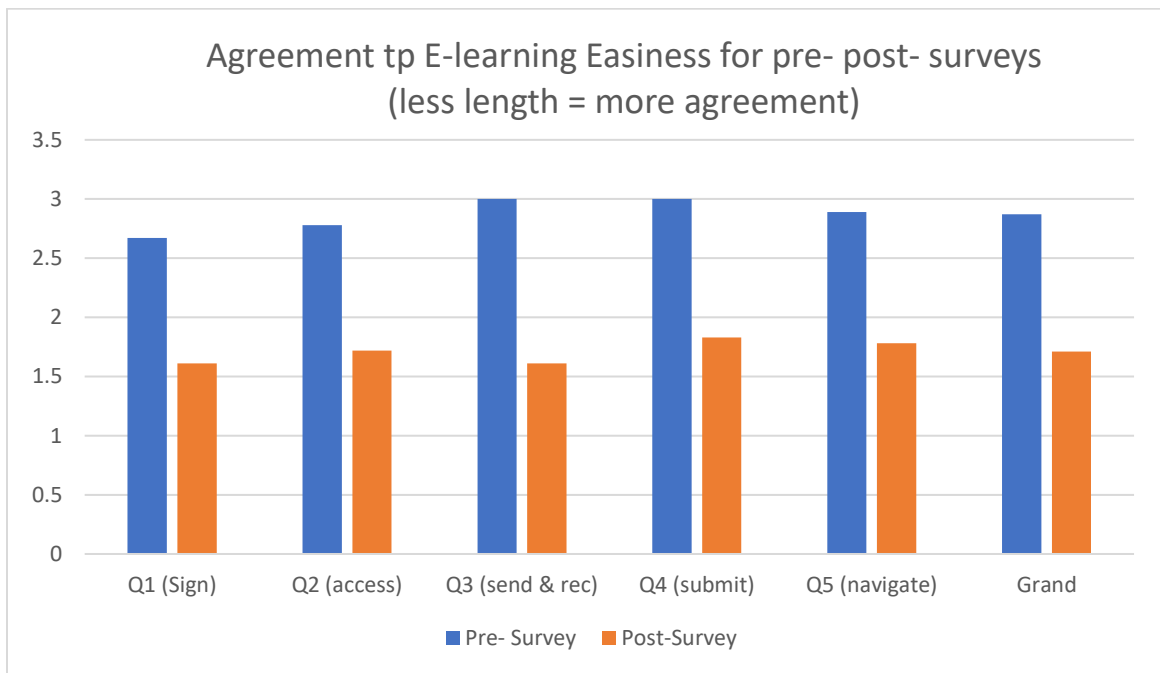


Chart 4.2: Bar representation of table 4.8.

From the above chart, the researcher can deduce the answer to research question 3 which tries to answer if the students perceive the E-learning as an easy process or no. The below table can be used for judgment.

Table 4.9: Showing the percentage of agreement associated with each numeric.

Agreement degree	SA	A	N	D	SD
Numeric	1	2	3	4	5
Agreement percentage	100%	75%	50%	25%	0%

The principle applied in table 4.9 is pretty simple. Taking the neutral as 50% and then dividing 100% evenly over the 4 degrees of agreement or disagreement, starting from zero for total disagreement and then going up by steps equal to the yield of the division. Evaluating the percentage of people who exhibit a certain opinion depends on the interpolation of the percentages representing the limits containing the result (in this case the mean or the grand mean).

So, getting back to the same subject, which is judging, the researcher can deduce:

- In the pre-survey the grand mean of this item is 2.87 and this means the percentage of agreement can be calculated from the sample calculation:

2.87 is located between 2 and 3, which have a 1 difference. Since the step is 1 this makes calculation easier, 2.87 is away 0.87 from the first limit 2. How much this represents can be evaluated as: $0.87 * 25\% = 21.75\%$. This value of percentage will be subtracted from the percentage representing the first limit (75%). Subtraction is applied because the more the number is, the less the agreement. So:

Average agreement for the easiness of online learning in pre-survey = 75% - 21.75% = 53.25%. And this ascertains the first comment which said that most students are neutral in this regard.

- In the post-survey the grand mean of this item became 1.71 and this means that agreement percentage rose to 82.25%, which means that students were really influenced by the lecture that was given to them online, and in the post survey this was reflected in the shape of mind changing from the state of neutrality to agreement, as shown by numbers. If the full data group is represented in bar chart it will look like below.

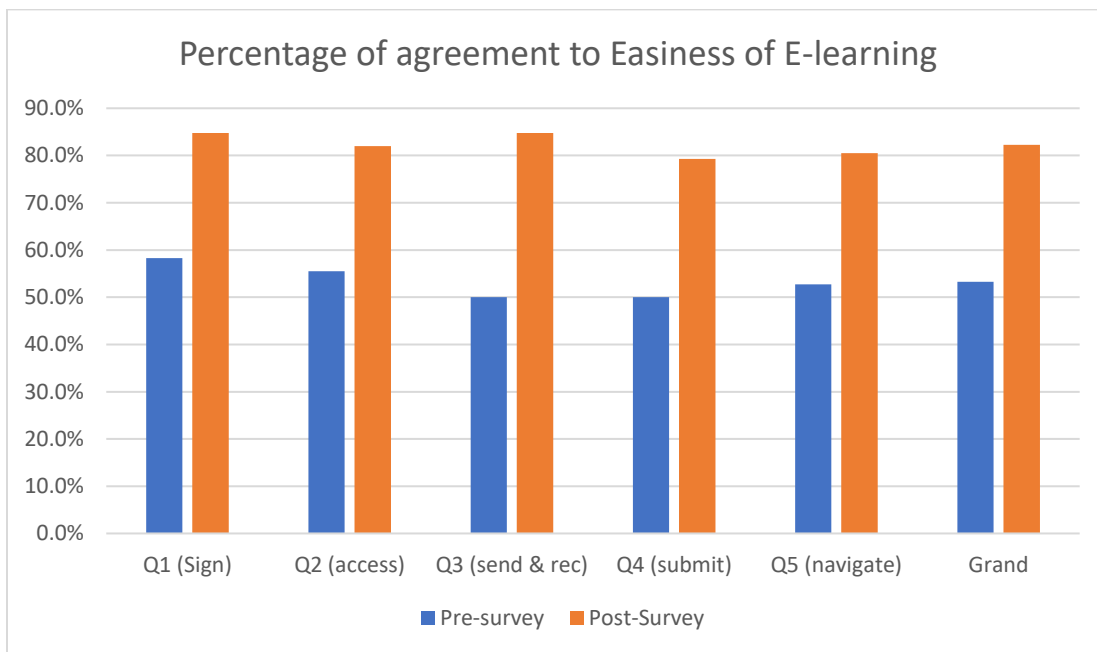


Chart 4.3: Bar chart for the comparison of agreement on the easiness of E-learning.

The same results were found in a research conducted by Khan et al (2020) which investigated “Students’ Perception towards E-Learning during COVID-19 Pandemic in India”. 73.4% agree that teacher and learner can share educational material easily and quickly through the medium of E-learning.

Results of this field can be compared to those of 2018 thesis “a survey on the use of Google classroom in English language education department of Islamic University of Indonesia” by Annita Muslimah, who compared exactly the same features. That thesis didn’t perform a pre-survey and so there is no room for comparing the differences; it rather collected students’ (sample of 190 persons) opinions about the easiness of using Google Classroom in general. The results were absolute rather than relative, and they can be considered equivalent to those of post-survey (Muslimah, 2018).

Here most of the features agreement rate is around 80% as it is represented in chart 4.3; comparing this to the results of Muslimah, a considerable match can be found. The results of the same features measured by Muslimah received agreement of almost the same percentage, with lower percentage (around 73%) in Q5 related to the easiness of navigating the system, which is still high (Muslimah, 2018).

Muslimah’s thesis measured one more feature which is easiness of understanding, which scored agreement percentage of 84% which is compatible with other features’ scores in both theses (this one and Muslimah’s). So, it can be said that the scores found in this thesis comply with the findings of Muslimah’s thesis regarding easiness of using Google Classroom (Muslimah, 2018).

Remark: In Muslimah’s thesis, no grand mean was calculated.

4.2.2. Perceived Usefulness

This section answers the second research question which is: Are there statistically significant differences in the students' attitude toward the online e-learning regarding to perceived usefulness and satisfaction? The table below explains the results.

Table 4.10: Comparison between students' attitudes regarding usefulness of E-learning.

Question	Pre-survey AVG	Pre-survey AVG (%)	Post-survey AVG	Post-survey AVG (%)	Percent Difference	Std. Dev. (Pre)	Std. Dev. (Post)
Q6	2.72	57.0%	2.94	51.5%	-5.5%	0.89	0.94
Q7	2.78	55.5%	3.06	48.5%	-7.0%	1.22	1.06
Q8	2.89	52.8%	2.22	69.5%	16.7%	1.13	0.43
Q9	2.17	70.8%	1.94	76.5%	5.7%	0.86	0.8
Q10	2.67	58.3%	2.28	68.0%	9.7%	0.91	0.57
Grand	2.64	59.0%	2.49	62.8%	3.8%	0.28	0.48

And the chart representing this is as follows:

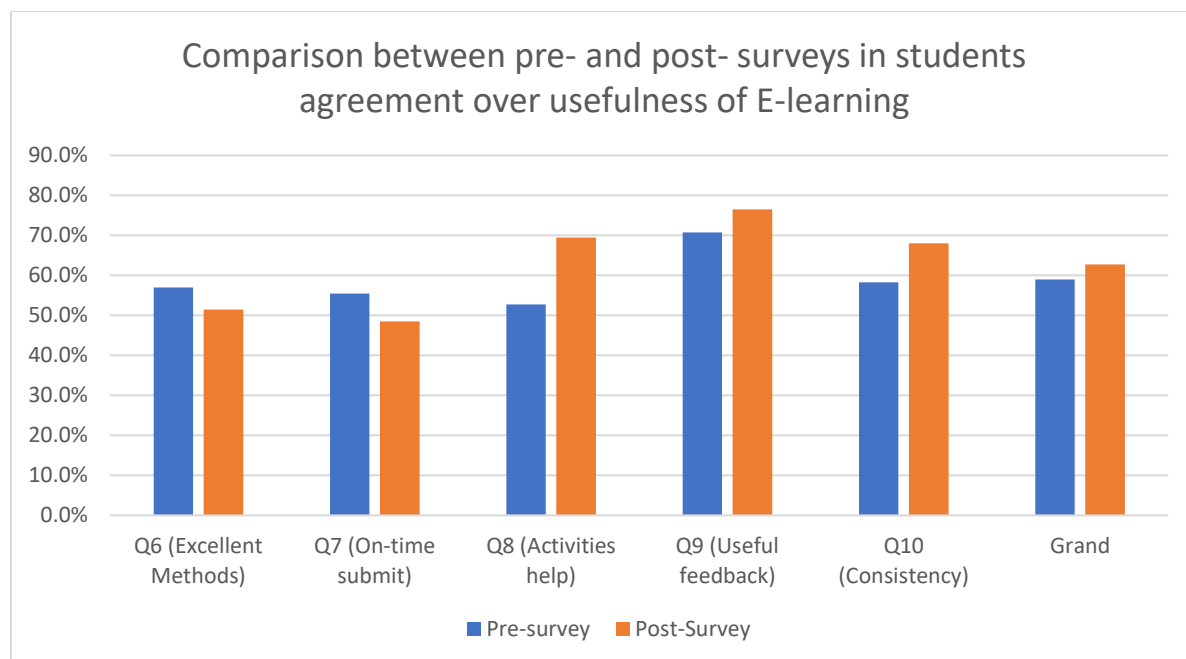


Chart 4.4: Representation of data in table 4.10.

First of all, it is noticed that post-survey results are more scattered than those of pre-survey (bigger standard deviations) although the grand standard deviation is less. As for the results, it is noticed that in both cases the students seem very close to the grey area of being indecisive, where all the values are close to 50% which is neutrality. Not only this, but the gross percentage is also 59% in pre-survey and 62.8% in the post survey. This means slight agreement over the usefulness of the E-learning. However, in both cases there is a slight inclination to agreement, and small progress is there in post-survey in this regard.

It is noticed as well that in this case there are questions that experienced reduction in agreement like Q6 and Q7. All questions are discussed below:

- Q6 and Q7 moved from 57% to 51.5% and from 55.5% to 48.5%, respectively. Despite moving from neutrality to neutrality, this is still a decline. Q6 asks if students view this tool as excellent method, and students who agreed this decreased. This is due to the fact

that they may like it, but they still cannot describe it as ‘excellent’ yet. Q7 which discusses on-time submission of assignments can be influenced the fact that students have to write the assignment by computer, not by hand like before, which was easier for them. However, Khan et al (2020), found a positive result since students can work at any time and place, 61.3% of students agreed that E-learning is a flexible medium.

- Q8 asks if online activities help to examine issues and apply what is learnt. This jumped from 52.8% to 69.5%. This shows that students agree fairly that this method helped them in examining the issues, and this is positive feedback indeed.
- Q9 asks if the feedback provided by lecturer is useful. It increased from 70.8 to 76.5% which means it moved to perfect zone of agreement. This means that students’ attitude got better in terms of agreement on usefulness of lecturer feedback.
- Q10 asks if objective is consistent with the tool. It jumped from 58.3% to 68%, and this means that the students really felt that their writing skills can develop (which is the objective) using E-learning.

In general, this item’s grand total increased slightly from 59% to 62.8% with raise of only 3.8%. The students’ attitudes regarding the usefulness of E-learning were slightly above neutral and did not change much in the post-survey. The researcher believes that this point needs more long-range experiment to be judged.

As for the research question addressed through this, which is RQ2, the researcher wants to check if the students see that online e-learning is a useful method. The result is that they viewed this tool as useful in doing so with slight agreement before and after the lecture, with small increase in the post-survey.

These findings go with a previous study (Khan et al, 2020) which emphasizes the possibility of e-learning to accommodate various learning contents. 59.2% agreed that online learning can be a useful method of learning. Results of Muslimah's thesis aforementioned in the previous subsection can be compared to findings of this thesis: Q6 here regarding Google Classroom as excellent medium scored here around 51% agreement in post-survey compared to 73% agreement in Muslimah's thesis; this big difference might be due to the fact that Muslimah's thesis linked this feature to social interaction in her thesis, which is actually not the right place for it. Q7 regarding on-time submissions achieved agreement percentage of 48% here compared to 86% of agreement in Muslimah's survey – another huge difference (Muslimah, 2018).

As for the rest: Q8 regarding application's help in activities scored 70% in this survey compared to 75% agreement in Muslimah's survey – almost the same. Q9 regarding useful feedback scored 76% here compared to 78% in Muslimah's survey – almost the same. Regarding the consistency in Q10, it achieved agreement percentage of 68% compared to 75% in Muslimah's survey – slightly more agreement (Muslimah,2018).

It can be concluded that Indonesian students voted for more perceived usefulness than students in Lakiyyah School. With general sense of agreement here, students in Muslimah's survey achieved considerably higher percentage of agreement. One of the reasons that can be considered is that Indonesian students are more familiar with online learning courses, especially that the biggest online courses website (Udemy) is a Malaysian website, operating in a neighbor country.

4.2.3 Communication and Interaction – RQ4 (research question 4)

The below table summarizes the results with the percentages for the pertinent questions:

Table 4.11: Comparison between students' attitudes regarding interaction and communication in E-learning.

Question	Pre-survey AVG	Pre-survey AVG (%)	Post-survey AVG	Post-survey AVG (%)	Percent Difference	Std. Dev. (Pre)	Std. Dev. (Post)
Q11	3.06	48.5%	2.89	52.8%	4.3%	1.06	1.13
Q12	2.39	65.3%	2.28	68%	2.7%	0.98	0.83
Q13	2.83	54.3%	2.94	51.5%	-2.8%	0.62	1.21
Q14	2.28	68%	3.72	32%	-36%	0.75	0.75
Q15	2.17	70.8%	1.72	82%	11.2%	0.86	0.75
Grand	2.54	61.5%	2.71	57.3%	-4.2%	0.38	0.75

First, it is noticed that standard deviation here is less scattered than before and values are closer to the means and to the grand mean, with less scattering pattern seen in the pre-survey compared to the post-survey.

The below chart summarizes the status:

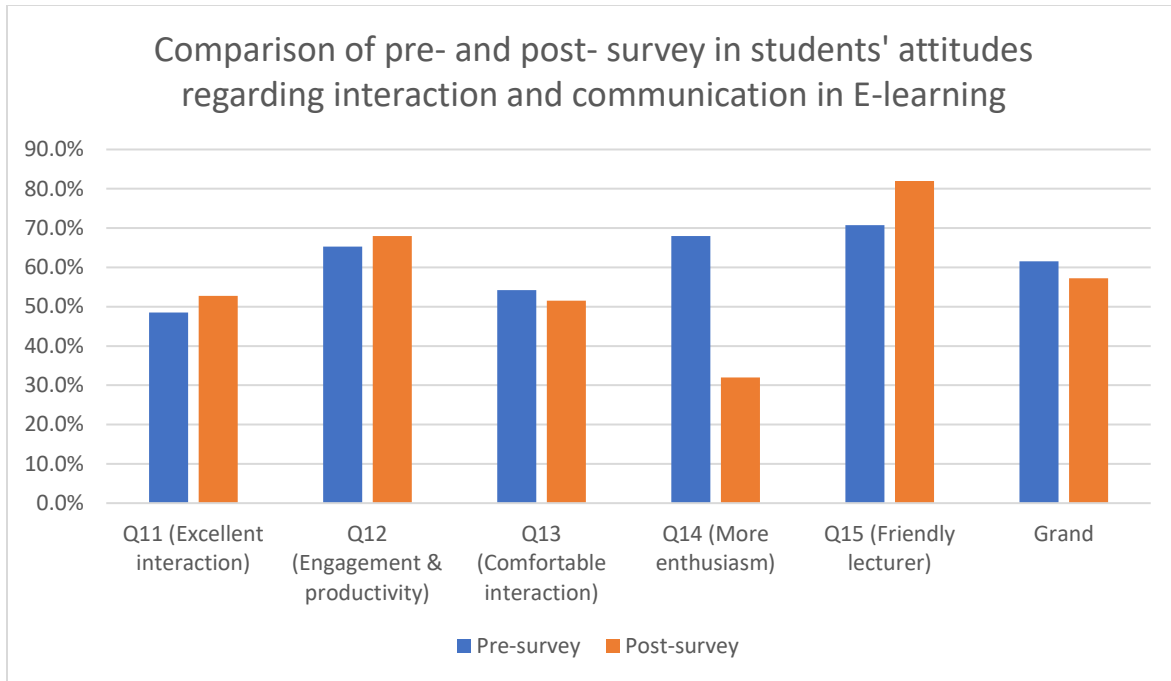


Chart 4.5: Representation of data in table 4.11.

Going through the points, the below can be noticed:

- Q11 asks the students if they view Google classroom as an excellent method for interaction and communication. This point moved from 48.5% in pre-survey to 52.8% in post-survey. A slight difference but generally the neutrality is prevailing. In fact, this is expected since online E-learning methods need some time to beat the f-t-f methods in providing better interaction.
- Q12 has a constructive dimension where it asks if lecturers keep students engaged in the lesson and in productive discussion. This point moved up from 65% to 68.3%, so it had a slight agreement and moved toward more agreement which is a good indicator, and this is due to the fact that this point is regarding instructor-student interaction, not the general interaction.

- Q13 asks about comfort in interacting with others regarding writing skills. This item experienced slight drop from 54.3% to 51.5%, but it still exhibits indecisiveness, and the students are not sure if this tool is comfort or no in delivering writing skills. This is due to the face that this method is not widespread since long time, and students are still not used to it.
- Q14 asks if the lecturers are more enthusiastic in delivering lectures through E-learning tools. This item had a drastic drop from 68% (close to agree) to 32% (close to strongly disagree). It is expected that this lecture specifically, because it is one lecture, was viewed by the students as a period rammed with information, and this didn't allow the instructor to show zeal.
- Q15 asks if lecturers are friendly and approachable; this item had a considerable increase from 70.8% to 82%. This is moving forward to strongly agree but still it is far. This is a good indicator to see that such intimacy can be delivered by E-learning tools like Google Classroom.
- Overall, this item dropped slightly from 61.5% to 57.3%. It moved from slight agree to less agree towards neutrality. But in general, the students' opinions in this area are very close to neutrality, where such personal matter can be the specific aspect that is not competent when compared to conventional learning.

So, getting back to the research question related to this group of statements, question 8 answers show slight agreement over the fact that interaction and communication is good via the E-learning tools, where the percentage was and still is close to the neutral position.

However, it still more than half of students consider e-learning is an interactive platform to be used. Almost the same results appeared clearly in Khan's study (2020) which showed that just 33.2% gave positive responses in this term.

Again, this thesis survey can be compared to Muslimah's thesis survey with the following comparison components: Q11 regarding excellent communication achieved 52% percent of agreement compared to 71% agreement on a question regarding acknowledgement of participation – a huge difference. Q12 regarding engagement and productivity scored 68% here compared to 72% - almost the same. Q13 regarding comfortable interaction achieved 52% agreement in this thesis compared to 70% agreement in Muslimah's survey – another huge difference (Muslimah, 2018).

Continuing the comparison, Q14 regarding more enthusiasm in Google Classroom achieved 31% agreement here and 69% agreement in Muslimah's thesis – more than double. Q15 about friendly lecturer scored 82% agreement here compared to 72% - considerably less agreement (Muslimah, 2018).

Muslimah's thesis proved significantly higher scores in in this regard, compared to scores that are not very far from neutrality in this thesis, and this can be attributed again to the fact that Indonesian students are more familiarized with online learning applications in general.

As explained, this is expected and E-learning as a totally new tool still needs improvement to cover this area and be competent in it.

4.2.4 Students' Satisfaction

In this section there is an answer the second research question: Are there statistically significant differences in the students' attitude toward the online e-learning regarding to perceived usefulness and satisfaction? The results are reflected in the below table:

Table 4.12: Comparison between students' attitudes regarding E-learning satisfaction.

Question	Pre-survey AVG	Pre-survey AVG (%)	Post-survey AVG	Post-survey AVG (%)	Percent Difference	Std. Dev. (Pre)	Std. Dev. (Post)
Q16	3.06	48.5%	2.39	65.3%	16.8%	1	0.61
Q17	3.33	41.8%	2.94	51.5%	9.7%	1.19	0.54
Q18	2.67	58.3%	2.72	57%	-1.3%	0.77	0.83
Q19	2.94	51.5%	2.28	68%	16.5%	1.35	0.67
Q20	2.61	59.8%	2.5	62.5%	2.7%	0.85	1.25
Q21	3.17	45.8%	2.67	58.3%	12.5%	0.99	1.24
Grand	2.96	51%	2.58	60.5%	9.5%	0.28	0.24

The above can be represented by below chart:

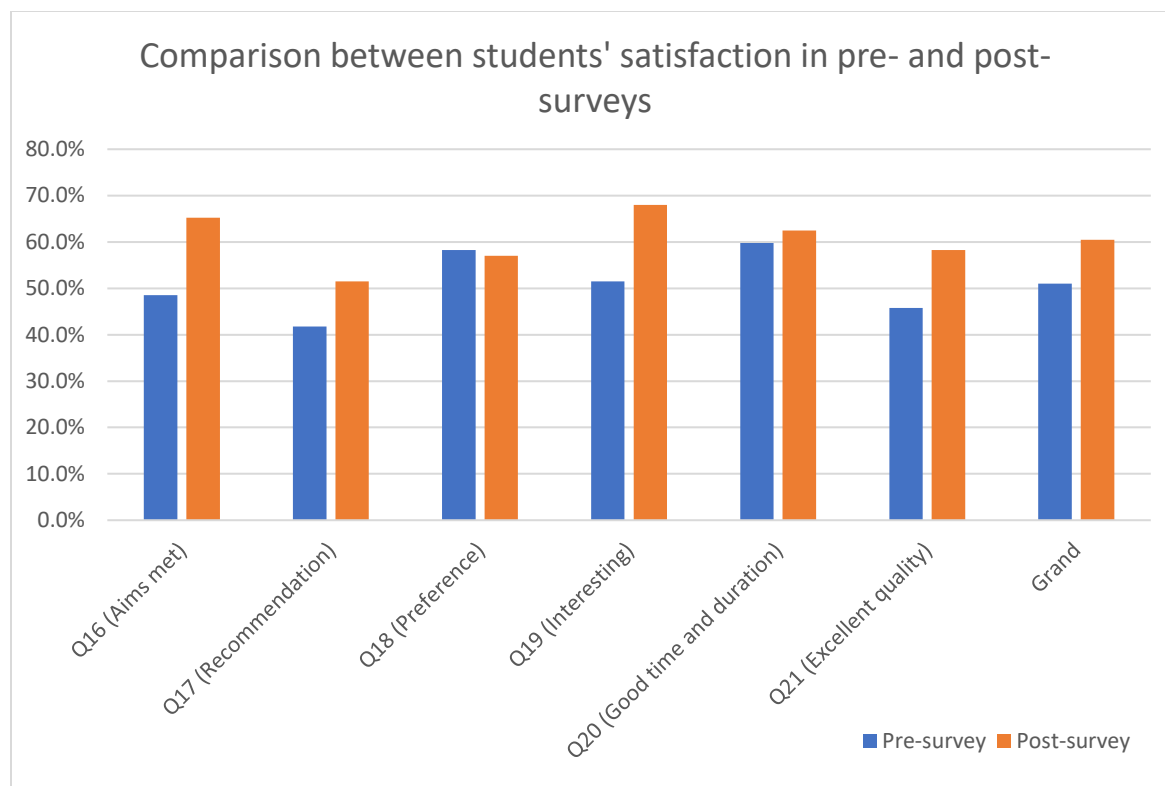


Chart 4.6: Representation of data in table 4.12.

First of all, pre-survey values are more scattered than those of the post-survey ones, but in general, standard deviation of the numbers and of the means is small.

The term satisfaction can be considered a good generalization for the whole experience, so this section and its results are significant for the final results of the study. The below points can be deduced and accordingly the research question will be discussed:

- Q16 asks if the subject meets the student's personal aims through technology used in online learning. These aims could be progress in grammar, vocabulary, cohesion or anything. This item jumped from approximate neutrality 48.5% to 65.3% which is a big increase, indicating that students' satisfaction level was boosted, and they started to view E-learning as an approach that can achieve their goals.

- Q17 asks students if they recommend e-learning to be applied in teaching other subjects. The pre-survey result was really low 41.8% which approached disagreement, but the post-survey result came very close to neutrality as 51.5%. So, the students' final decision is that they don't know if they definitely recommend it to be applied in other subjects.
- Q18 asks the students to confirm if Google Classroom can be their first choice compared to other methods (conventional f-t-f methods). Slight agreement was in this item in the pre-test with 58.3% agreement -very close to neutrality- and roughly nothing changed when this number dropped to 57%.
- Q19 asks if E-learning can be considered by students as interesting tool for learning skills of writing. This question had a big jump from neutrality -51.5%- to nearly agreement 68%, and this can be considered as a sign of satisfaction.
- Q20 asks if the lessons timing and duration are suitable for students. This question had a slight agreement of 59.8% and increased a bit to 62.5%. Not much change is there and students seem to have answered what they think about the timing of their school online classes. This item indicates slight satisfaction.
- Q21 asks if the students can consider the quality if learning writing online as excellent. This question had a good jump from 45.8% to 58.3%. It was close to neutrality but it jumped further towards agreement. This indicator is important in showing students' satisfaction.
- Overall grand mean for satisfaction increased from 51% to 60.5%. This means that at the pre-survey students were really unsure how they felt about this new system as the score is neutral, and their satisfaction increased after the lecture supposedly. It did not reach very far; it was slight satisfaction.

Answers for the research questions can be found below:

- Students can be considered slightly satisfied with the online learning.
- Students have slight agreement on stating they prefer E-learning over the conventional method. In fact, their agreement is really close to the neutrality position.
- Students can't be thought of as 'recommenders' of the new system. Their pre-survey response indicated tendency to not recommend it and their post-survey indicated neutrality, so this point cannot be conclusive as the students were not decisive about it and did not give a yes or no question finally.

Four of the features measured here can be compared to the findings of Muslimah's thesis survey results, summarized as: Q16 discussing meeting the goals achieved 64% here compared to 73% in Muslimah's thesis – considerably higher agreement. Q17 asking about recommending the tool achieved 51% compared to 77% - much higher. Q18 asking about preferring Google Classroom achieved 58% here compared to 74% in Muslimah's thesis – higher preference of the tool in Indonesia. Q19 about considering Google Classroom as an interesting tool achieved 68% here compared to 74% agreement in Muslimah's thesis- slightly higher (Muslimah, 2018).

As a summary for this comparison, Muslimah's thesis findings show much more agreement in the satisfaction of the total online learning experience compared to the results of the same questions group in Lakiyyah School. This is actually a logical result based on the above comparisons.

4.2.5 Improvement in Writing – RQ5 (research question 5)

The results can be found in the below table:

Table 4.13: Comparison between students' attitudes regarding improvement in writing.

Question	Pre-survey AVG	Pre-survey AVG (%)	Post-survey AVG	Post-survey AVG (%)	Percent Difference	Std. Dev. (Pre)	Std. Dev. (Post)
Q22	2.56	61%	1.72	82%	21%	1.04	0.83
Q23	2.83	54.3%	1.72	82%	27.7%	1.15	0.83
Q24	2.83	54.3%	1.78	80.5%	26.2%	1.15	0.88
Q25	2.17	70.8%	1.78	80.5%	9.7%	0.92	0.88
Q26	2.61	59.8%	1.61	84.8%	25%	1.14	0.78
Q27	3.06	48.5%	1.89	77.8%	29.3%	1.16	0.83
Q28	2.61	59.8%	1.83	79.3%	19.5%	0.92	0.79
Q29	3	50%	2.11	72.3%	22.3%	1.14	0.96
Q30	2.78	55.5%	2.33	66.8%	11.3%	1.06	0.91
Q31	3.06	48.5%	1.72	82%	33.5%	1	0.83
Q32	2.44	64%	1.56	86%	22%	1.04	0.86
Q33	2.5	62.5%	1.94	76.5%	14%	0.86	1.06
Q34	2.56	61%	1.44	89%	28%	0.98	0.62
Grand	2.69	57.8%	1.8	80%	22.2%	0.26	0.23

Comparison of pre- and post-surveys in writing improvement.

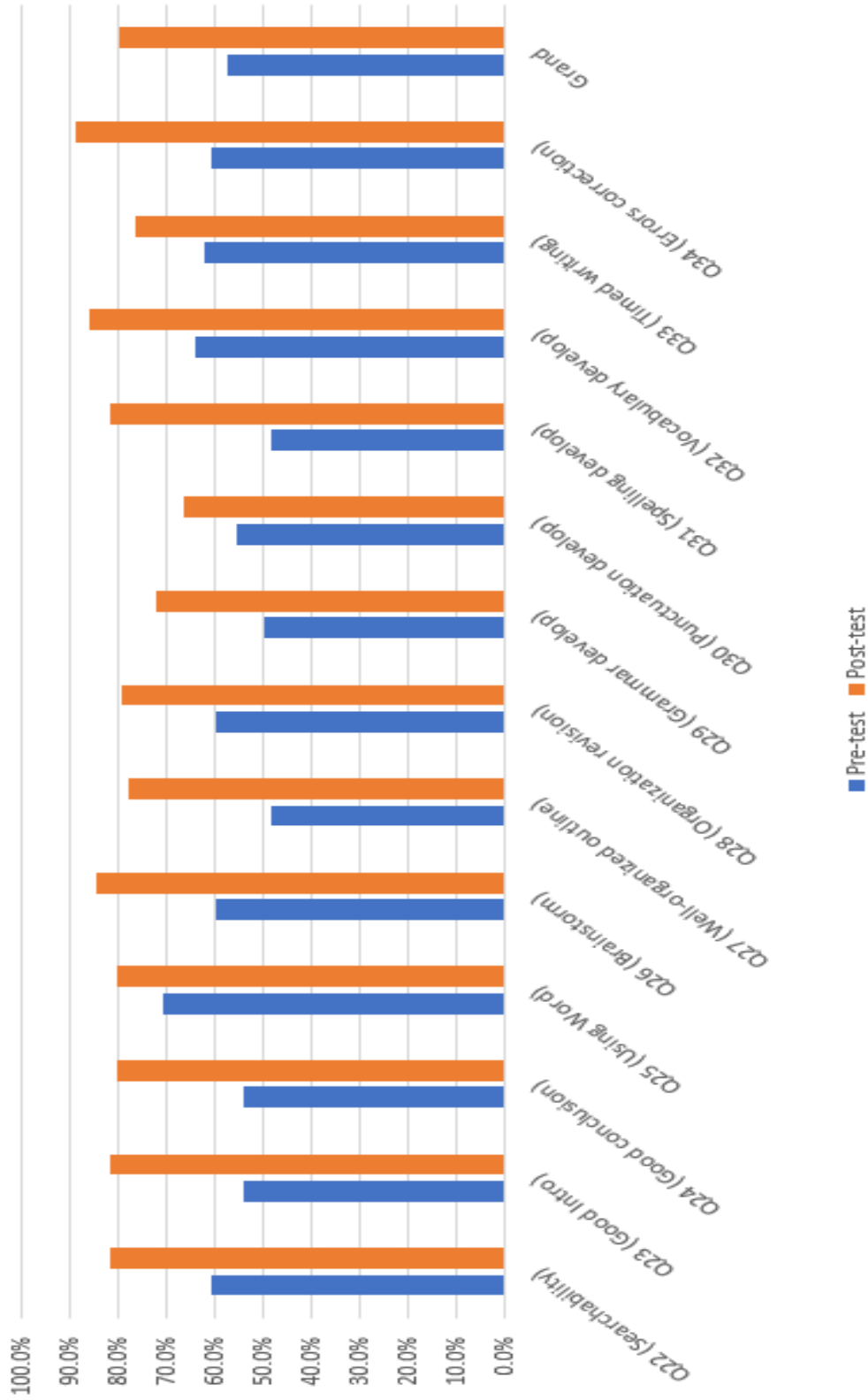


Chart 4.7: Representation of data in table 4.13.

Even though this set is the biggest and the standard deviation is expected to be the largest, but here it yielded low values and this gives more smoothness for values.

Looking at the above table and chart, the following can be deduced:

- Q22 asks students to confirm if E-learning helps them in using search engines (like Google) to search and locate data that support their ideas. The average jumped from 61% (slightly agree) to 82% (beyond agreement). This is expected in fact since the tool itself is a Google product and using the mobile to attend class can achieve this. Khan et al (2020) also got positive results in term of “Access Study Resources Effectively” with the help of the E-learning tool, 61.4 % agree.
- Q23 asks students if E-learning helps them write a good introduction in essays. The result jumped from 54.3% (approximately neutral) to 82% (beyond agreement).
- Q24 asks students if E-learning technologies help them write a good conclusion in essays. The result jumped from 54.3% in the pre-survey (approximately neutral) to 80.5% which indicates agreement.
- Q25 asks the student if E-learning technologies help the students in using word processing programs -like Microsoft Word- and the answers average increased from 70.8% in pre-survey to 80.5%. This is a logical result since the assignments requested from the students are done by this program usually.
- Q26 asks students if E-learning technologies help the students in brainstorming before starting the writing. This average jumped from 59.8% in presurvey to 84.8% in post survey which is a bit close to strongly agree. This is because the students use search engines as mentioned earlier which can induce new ideas.

- Q27 asks students if technologies used in online learning help them write a well-organized and developed outline. It jumped from 48.5% in presurvey to 77.8% in post survey supposedly due to easiness offered by programs like Word and Excel.
- Q28 asks students if technologies used in online learning help them revise the development and organization of their own writing. This jumped from 59.8% in pre-survey to 79.3% in post-survey. This is because of the easiness of search on word processing programs, and easiness of editing and adjustment.
- Q29 asks students if Technologies used in online learning help them develop their grammar. This jumped from 50% to 72.3% (from neutrality to agreement). This can be attributed to the good employment of educational tools like videos.
- Q30 asks students if technologies used in online learning help them develop their punctuation. This point increased from 55.5% in pre-survey to 66.8% in post survey. The increase is not that much because most of the students (as noticed) had already had good skills in punctuation.
- Q31 asks students if technologies used in online learning help them develop their spelling. This jumped from 48.5% to 82% and this can be attributed to the auto-correct technique applied usually in computer and mobile apps.
- Q32 asks students if technologies used in online learning help them develop their vocabulary. This jumped from 64% in pre-survey to 86% in post-survey due the same reason mentioned in Q31.
- Q33 asks students if technologies used in online learning help them to effectively write under time constraints. This jumped from 62.5% in pre-survey to 76.5% in post-survey,

supposedly due to the strict timing imposed by apps and algorithms in situations like exams.

- Q34 asks students if technologies used in online learning help them identify and correct writing errors. This jumped from 61% to 89% which is really close to strongly agree. This can be attributed to the technique of auto-correct applied in all the apps and programs.
- The overall percentage jumped from 57.8% (close to neutrality) in pre-survey to 80% (more than agreement) in post-survey, and this indicates that students feel that the online E-learning is really helping them in writing skills, search, brainstorming, organization and correction of errors.

Research question related to this set is RQ5 which investigates if students believe that E-learning methods help them in the improvement of the different aspects of learning skills of the writing. The answer here is definitely yes, as it can be deduced from the points reviewed above.

In another study conducted by Al Ahsan (2019) “The Effectiveness of Using Google Classroom Application to Teach Writing” it was obvious that students showed great satisfaction using Google Classroom to learn writing skills. They claimed that this application helped them share their ideas easily and they were more comfortable when doing their assignments using it everywhere and at any time.

4.3. Summary

The results fluctuated from neutrality to slightly agrees and reaching up to agreement over the benefits of E-learning. The students in general view this tool as a useful and pretty easy tool in improving their writing skills, but their satisfaction towards it is still incomplete because they are still not very used it, so the factor of time is needed.

Students' answers were inconclusive regarding the recommendation of this tool for teaching other subjects, and they still do not agree for this tool as a tool supporting interaction and communication. More details regarding the results and their implications are discussed along with recommendations in the next chapter.

Chapter five

Conclusions and Recommendations

5.0. Introduction

This chapter is dedicated to give the reader a summary of the results in the form of statements, and the researcher will discuss the results dimensions, possible reasons, and implications. Null hypotheses will be reviewed here with detailed approval or negation. Each hypothesis will be elaborated with its pertinent questions.

Based on upon the conclusions and the opinions of the students who participated in the tests and questionnaires, recommendations and suggestions will be proposed for the reader of the research to give chance to benefit from the study.

5.1. Review of the null hypotheses

In this section, the researcher will review the null hypotheses and confirm or negate them. They will be given the abbreviation NH (standing for null hypothesis).

1- NH1: Experimental group students can apply skills of writing correctly after the online e-learning. And they can exhibit the same level of skills measured for the control group students.

This hypothesis is correct. It is worth remembering that experimental group exhibited a slightly better level in English writing skills (measured by pre-test rubrics) than those of the control group, but in general their level can be considered close to equality.

Experimental group exhibited progress better than control group, with 10% increase in their overall mark compared to 7% achieved by the control group. The difference is not that far in value, and so the same effect can be considered applicable for both.

2- NH2: Students perceive E-learning method as useful and satisfied method in learning.

This hypothesis is correct. The degree to which students agree on this is close to that of NH1. The agreement on this didn't change much, and the increase was only 4% in agreement to it since it rose from 59% in pre-survey to 63% in post-survey.

This set included questions about excellence of the methods used in delivering writing skills and quality of feedback and their satisfaction about using e-learning to learn writing. In fact, the agreement of the students is still close to neutrality, and they still cannot exhibit strong consent on the tool usefulness.

To elaborate more, this hypothesis is not all the way correct, where the satisfaction exhibited by the participants was only slight satisfaction, as the percentage of agreement to this point is only 61% in the post-survey, which is not very far from the neutral position. Not only this, but the pre-survey result was also neutral (51%).

Looking to survey's question 18 which asks if Google Classroom can be considered as students' first choice. Falling from 58% to 57% and considering that 57% is far closer to neutrality than agreement makes the researcher unable to consider this even as agreement. So, it can be said that even if this question will be answered with yes by majority, this still needs time to achieve a result like this.

Moreover, the statement 17 "I would recommend this mode of learning to be applied to the other appropriate subject." which jumped from 42% in the pre-survey (less than neutral) to 52% (approximately perfect neutrality). This means that students didn't make their mind conclusively. They can't say if they recommend this tool for other subjects or no.

This means that students are still not completely happy with the E-learning, and the progress value means that gaining their satisfaction won't be an easy job.

3- NH3: Students view E-learning methods as good tools that are suitable for interaction and communication with teachers and other students and it easy to use.

This hypothesis is incorrect. Despite the fact that pre- and post- surveys had both slight agreement from the students over this point, but the agreement over it still dropped from 62% to 57%, which means it approached neutrality. The final result is very close to neutral position with very small increment towards agreement, and this means that although students are slightly satisfied with the usefulness offered by this tool, but this can be limited to the pedagogical level, not human one.

Questions related to this point asked the students about easiness of accessibility, navigation, and submission of assignments. The agreement over this point jumped from neutrality of 53% in the pre-survey to a very good degree of agreement of 82%. In fact, the students belong to a generation that has been using the mobiles and laptops for years now, so this result is pretty logical.

4- NH4: Students believe that E-learning methods help them in the improvement of the different aspects of learning skills of the writing and there are no specific writing skills that have been influenced specifically compared to other ones.

This hypothesis is correct. Unlike other agreed hypotheses, the agreement here came considerable with big jump from semi-neutral position in the pre-survey of 58% to good degree of agreement in the post-survey of 80%. The questions asked to the students were specific about parts of the writing like introduction and conclusion, and about pre-requisites of it like grammar,

vocabulary and correction. All points discussed had big increase from neutrality or slight agreement to agreement and more than it. Accordingly, the students believe that their writing skills really improved through this tool. As a comparison with the result of NH2 regarding usefulness, they see it as useful with slight agreement, but they don't deny that results were good.

Looking at the progress achieved in the rubrics content, vocabulary, language, and mechanics, then the researcher can say that the progress achieved in each rubric for both groups doesn't have much variance, with slightly better performance in progress achieved by experimental group participants. The language rubric only exhibited slightly less progress in the experimental group, and the students are generally weak in it. This will be reviewed in the recommendations.

To sum up, students are moderately satisfied with the mode of E-learning and this includes the usefulness of it, but their judgment of it as easy means for delivering writing skills is highly positive. Judging from numbers, the students achieved close results when both modes of education are applied (f-t-f and online).

Students agree well over the improvement of writing requirements, but they are still indecisive in the areas of communication and recommendation of the tool for other subject, where their answers came neutral and they factually neither recommend it nor unrecommend it. This can be deduced if the process is given more time.

5.2. Recommendations

According to the results drawn from this study, the below recommendations can be proposed for the readers and anyone related to the educational process:

- It is recommended to hold workshops. Participants must include students, their parents, and teachers to check what must be done to make students feel that E-learning is more useful in delivering writing skills.
- Time and duration of the classes must be studied thoroughly to be more suitable for the students and teachers.
- New ways for improving the content and vocabulary are recommended to be introduced for better results. Extra-curriculum activities can be a good choice, since the students show a weak basis in these two areas specifically, and this can be attributed to their performance in the previous years.
- For more accuracy, further studies are recommended to cover more students, more schools, and give students more than one lecture by different teachers.

5.3. Summary

Writing is the most complex skill in any language so it must be given special care by educators, and therefore it is chosen to be covered in this study.

E-learning started to invade the world in the past few years, and during the lockdown period that was caused by the wide spread of COVID-19 pandemic, it became inevitable to use this tool to deliver education to students by distance learning.

Students who participated in this study were really cooperative and gave their opinions without any intervention from any party.

In general, this tool still needs more improvement to gain more satisfaction of the students especially on the interactive level, and due to the lack of the physical communication, instructors are advised to be more patient and kinder with the students.

Blended learning is recommended to be applied from time to time, whenever it is possible, where physical interaction is very important whatsoever, and learning must not be limited to virtual world all the time.

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Appendix A

1.11. Terminology

For the sake of this research, the following definitions for the jargon used will be adopted:

1- E-learning: includes processes more than online learning, virtual learning, distributed learning, networked or web-based learning. Letter ‘e’ stands for electronic, so this learning module incorporates all educational activities that are carried out by individuals or groups communicating online or offline, and synchronously or asynchronously through networked or standalone computers and other electronic devices (Chitra and Raj, 2018, p.1).

2- Virtual Learning: “interface between the students and a virtual professor and provides personalized learning materials to the users. Personalized learning materials can be created only if the system adapts to the student needs shown in the student’s interaction process.” (Trajkovik et al., 2001, p.2).

3- Blended Learning: “Learning that combines instructor-led training (ILT) with web-based training (WBT) and other learning activities outside the classroom, with such learning activities as pre-work, independent projects, mentorships, and internships. It includes both synchronous and asynchronous learning.” (Victor and Hart, 2016, p.1503).

4- Mobile Learning: “Learning that occurs on a portable device, such as a tablet or smartphone.” (Victor and Hart, 2016, p.1503).

5- Informal Learning: “Learning that occurs outside a formal learning environment (classroom, online class, etc.). This type of learning is facilitated by social interaction.” (Victor and Hart, 2016, p.1503).

6- Distributed Learning: “an umbrella term including one or more” of 3-5. (Victor and Hart, 2016, p.1503).

7- Synchronous E-Learning: commonly supported by media such as videoconferencing and chat, it can support e-learners in learning communities’ improvement. Learners and teachers view synchronous e-learning as more social and a method to prevent frustration by talking, discussion, and asking and answering questions in real time. Synchronous sessions make e-learners act as participants do not isolate (Hrastinski, 2008).

8-Asynchronous E-Learning: commonly facilitated by media such as e-mail and discussion boards, it supports work relations among learners and tutor at offline times (when they are not online simultaneously). So, it is a flexible tool of e-learning. In fact, many people prefer asynchronous online courses because of this quality, combining education with work, family, and other commitments. Asynchronous e-learning enables learners to enter e-learning environment at any time, download documents, and send messages to teachers or counterpart students. Students may need extra effort and time refining their contributions, which yield generally more thoughtful results compared to synchronous communication. (Hrastinski, 2008)

9- Constructivism: An approach to teaching and learning based on the assumption that learning is outcome of "mental construction". Students learn by fitting new information together with information they already possess. Constructivists believe that learning is influenced by the context in which an idea is taught and by students' beliefs and attitudes. This theory found in psychology and it explains how people gain knowledge and learn (Bada, 2015).

Appendix B

Pre/post-survey for the experiment group

A Survey of Students' opinions on using online learning and their improvement in English writing skills during Covide-19

GENERAL DEMOGRAPHIC

tick (✓) each of the items below

Gender: Female ----- Male-----

Have you ever participated in any type of e-learning before the pandemic?

___ Yes ___ No

Do you have an internet connection at home?

___ Yes ___ No

POSITIVE STATEMENTS

Respond to the following items by placing a check mark (✓) in the answer box that corresponds to your response.

Information:

SA: Strongly Agree = 1 point

A: Agree = 2 points

N: Neutral = 3 points

D: Disagree = 4 points

SD: Strongly Disagree = 5 points

No	Statement	SA	A	N	DA	SDA
	EASE OF ACCESS					
1	I can sign to Google Classroom easily.					
2	I can access lesson materials easily.					
3	I can send and receive assignments easily.					
4	I can submit assignments easily.					
5	I can navigate the system easily.					
	Perceived Usefulness	SA	A	N	DA	SDA

6	Methods of teaching in Online learning are excellent.					
7	Online learning helps me to submit assignments on time.					
8	The course activities help to examine issues, to evaluate new ideas, and to apply what has been learned.					
9	The e-feedback provided by the lecturer is useful.					
10	The subject objective, assessment and content are consistent with the aid of Google Classroom.					
	Communication and Interaction	SA	A	N	DA	SDA
11	Online learning is an excellent medium for social interaction.					
12	Lecturers keep course participants engaged and in productive discussion.					
13	Interacting with other participants is comfortable regarding writing activities.					
14	Lecturers are more enthusiastic in teaching while explaining via the online technology tools.					
15	Lecturers are friendly and approachable.					
	Students' Satisfaction	SA	A	N	DA	SDA
16	The subject meets my personal aims through the technology tools used through online learning.					
17	I would recommend this mode of learning to be applied to the other appropriate subject.					
18	Google classroom would be my first choice in active learning compared to other methods.					
19	Online learning is an interesting platform to learn writing.					
20	The time of the lessons and its duration is suitable.					
21	The quality of learning writing activity is excellent.					
	Improvement in writing	SA	A	N	DA	SDA
22	Technologies used in online learning help me successfully use internet search engines to locate information to support my ideas.					

23	Technologies used in online learning help me write a good introduction for an English essay.					
24	Technologies used in online learning help me write a good conclusion for an English essay.					
25	Technologies used in online learning help me use a word processing program to type and format my essays in English.					
26	Technologies used in online learning help me effectively brainstorm to gather ideas before writing.					
27	Technologies used in online learning help me write a well-organized and developed outline.					
28	Technologies used in online learning help me revise the development and organization of my own writing.					
29	Technologies used in online learning help me develop my grammar.					
30	Technologies used in online learning help me develop my punctuation.					
31	Technologies used in online learning help me develop my spelling.					
32	Technologies used in online learning help me develop my vocabulary.					
33	Technologies used in online learning help me to effectively write under time constraints.					
34	Technologies used in online learning help me identify and correct writing errors.					

Appendix C

Pre/post-tests for both groups

Pre-test

Write 120 – 140 words in English on the following topic: Students have various opinions as to which is the most important school subject. What is the most important subject that you study at school? Write a composition stating and explaining your opinion.

Post-test

Write 120 – 140 words in English on the following topic: From what age should children be allowed to have their own cellphones? Write a composition stating and explaining your opinion.”

Appendix D

pre/posttest results for the experiment group

Student	Test	Content/8	Vocabulary/10	Language/16	Mechanics/6	Total/40
S1	Pre	5	6	10	4	25
	Post	7	8	14	5	34
S2		4	6	11	4	25
		6	6	10	3	25
S3		2	3	2	2	9
		3	3	4	3	13
S4		5	6	14	4	29
		6	8	14	6	34
S5		5	6	10	4	25
		5	6	10	5	26
S6		8	6	13	4	31
		8	8	14	6	36
S7		8	6	10	4	28
		4	9	14	6	33
S8		6	8	12	4	30
		8	8	14	3	33
S9		5	6	10	4	25
		6	7	12	5	30
S10		2	5	6	3	16
		5	8	14	5	32
S11		3	5	6	3	17
		5	6	8	4	23
S12		3	4	5	2	14
		4	5	5	4	18
S13		4	5	8	3	20
		5	8	8	5	26
S14		3	4	5	2	14
		3	3	5	3	14
S15		3	5	6	3	17
		4	5	9	5	23
S16		3	3	6	5	17
		5	3	5	5	18
S17		3	5	6	4	18
		3	4	4	5	16

S18		2	4	5	3	14
		2	4	3	3	12

Test	Content/8	Vocabulary/10	Language/16	Mechanics/6	Total/40
Pre-test/mean	4.1	5.2	8.1	3.4	20.8
Post-test/mean	4.9	6.1	9.3	4.5	24.7

Appendix E

pre/posttest results for the control group

Student	test	Content/8	Vocabulary/10	Language/16	Mechanics/6	Total/40
S1	Pre	2	3	4	3	12
	Post	3	5	5	4	17
S2	Pre	3	4	4	4	15
	Post	3	5	5	4	17
S3	Pre	5	5	8	4	22
	Post	6	5	10	5	26
S4	Pre	3	4	4	3	14
	Post	4	5	5	4	18
S5	Pre	6	5	10	5	26
	Post	6	6	12	6	30
S6	Pre	3	4	6	4	17
	Post	4	4	8	5	21
S7	Pre	3	5	6	3	17
	Post	3	4	5	4	15
S8	Pre	3	3	6	4	16
	Post	4	4	8	5	21
S9	Pre	4	4	7	4	15
	Post	4	3	8	4	19
S10	Pre	6	8	12	4	30
	Post	8	8	14	6	36
S11	Pre	4	6	10	4	24
	Post	5	7	12	5	29
S12	Pre	5	6	10	4	25
	Post	5	8	12	6	31
S13	Pre	3	5	6	4	18
	Post	4	5	7	4	20
S14	Pre	3	4	6	3	16
	Post	3	4	7	4	18
S15	Pre	4	5	7	4	20
	Post	5	5	8	5	23
S16	Pre	3	3	7	4	17
	Post	3	3	8	5	21
S17	pre	2	3	4	3	12
	post	3	3	5	4	15
S18	pre	3	3	5	3	14
	post	3	3	6	4	16

Test	Content/8	Vocabulary/10	Language/16	Mechanics/6	Total/40
Pre-test/mean	3.6/8	4.4/10	6.8/16	3.7/6	18.5/40
Post-test/mean	4.2/8	4.8/10	8.1/16	4.7/6	21.8/40

Appendix F

Post survey results for the experiment group

No	Statement	SA	A	N	DA	SDA
	EASE OF ACCESS					
1	I can sign to Google Classroom easily.	11	4	2	1	
2	I can access lesson materials easily.	9	5	4		
3	I can send and receive assignments easily.	9	9		1	
4	I can submit assignments easily.	4	13	1		
5	I can navigate the system easily.	5	12	1		
	Perceived Usefulness	SA	A	N	DA	SDA
6	Methods of teaching in Online learning are excellent.	1	4	9	3	1
7	Online learning helps me to submit assignments on time.	2	3	5	8	
8	The course activities help to examine issues, to evaluate new ideas, and to apply what has been learned.		13	4		
9	The e-feedback provided by the lecturer is useful .	6	7	4		
10	The subject objective, assessment and content are consistent with the aid of Google Classroom.	1	11	6		
	Communication and Interaction	SA	A	N	DA	SDA
11	Online learning is an excellent medium for social interaction.	1	8	1	6	1
12	Lecturers keep course participants engaged and in productive discussion.	3	8	6	1	
13	Interacting with other participants is comfortable regarding writing activities.	1	7	5	2	3
14	Lecturers are more enthusiastic in teaching while explaining via the online technology tools.			8	7	3
15	Lecturers are friendly and approachable.	8	7	3		
	Students' Satisfaction	SA	A	N	DA	SDA

16	The subject meets my personal aims through the technology tools used through online learning.	1	9	8		
17	I would recommend this mode of learning to be applied to the other appropriate subject.		3	13	2	
18	Google classroom would be my first choice in active learning compared to other methods.		9	5	4	
19	Online learning is an interesting platform to learn writing.	1	12	4	1	
20	The time of the lessons and its duration is suitable.	4	7	2	4	1
21	The quality of learning writing activity is excellent.	2	8	5	3	
	Improvement in writing	SA	A	N	DA	SDA
22	Technologies used in online learning help me successfully use internet search engines to locate information to support my ideas.	9	5	4		
23	Technologies used in online learning help me write a good introduction for an English essay.	9	5	4		
24	Technologies used in online learning help me write a good conclusion for an English essay.	9	4	5		
25	Technologies used in online learning help me use a word processing program to type and format my essays in English.	9	4	5		
26	Technologies used in online learning help me effectively brainstorm to gather ideas before writing.	10	5	2		
27	Technologies used in online learning help me write a well-organized and developed outline.	6	9	2	1	
28	Technologies used in online learning help me revise the development and organization of my own writing.	6	10	1	1	
29	Technologies used in online learning help me develop my grammar.	6	5	7	1	
30	Technologies used in online learning help me develop my punctuation.	5	2	11		
31	Technologies used in online learning help me develop my spelling.	8	8	1	1	

32	Technologies used in online learning help me develop my vocabulary.	11	5	1	1	
33	Technologies used in online learning help me to effectively write under time constraints.	8	5	3	2	
34	Technologies used in online learning help me identify and correct writing errors.	11	6	1		

Appendix G

Pre-survey results for the experiment group

No	Statement	SA	A	N	DA	SDA
	EASE OF ACCESS					
1	I can sign to Google Classroom easily.	3	6	4	4	1
2	I can access lesson materials easily.	4	5	3	3	3
3	I can send and receive assignments easily.	3	5	5	2	3
4	I can submit assignments easily.	2	7	2	3	4
5	I can navigate the system easily.	3	6	3	2	4
	Perceived Usefulness	SA	A	N	DA	SDA
6	Methods of teaching in Online learning are excellent.	2	4	9	4	
7	Online learning helps me to submit assignments on time.	2	6	7		3
8	The course activities help to examine issues, to evaluate new ideas, and to apply what has been learned.	2	4	8	2	2
9	The e-feedback provided by the lecturer is useful.	5	5	8		
10	The subject objective, assessment and content are consistent with the aid of Google Classroom.	1	7	8	1	1
	Communication and Interaction	SA	A	N	DA	SDA
11	Online learning is an excellent medium for social interaction.		6	9	1	3

12	Lecturers keep course participants engaged and in productive discussion.	2	10	4	1	1
13	Interacting with other participants is comfortable regarding writing activities.	1	2	14	1	
14	Lecturers are more enthusiastic in teaching while explaining via the online technology tools.	3	7	8		
15	Lecturers are friendly and approachable.	4	8	5	1	
	Students' Satisfaction	SA	A	N	DA	SDA
16	The subject meets my personal aims through the technology tools used through online learning.	1	3	10	2	2
17	I would recommend this mode of learning to be applied to the other appropriate subject.		5	7	1	5
18	Google classroom would be my first choice in active learning compared to other methods.	3		11	4	
19	Online learning is an interesting platform to learn writing.	3	4	5	3	3
20	The time of the lessons and its duration is suitable.	1	7	9		1
21	The quality of learning writing activity is excellent.		4	10	1	3
	Improvement in writing	SA	A	N	DA	SDA
22	Technologies used in online learning help me successfully use internet search engines to locate information to support my ideas.	4	3	8	3	
23	Technologies used in online learning help me write a good introduction for an English essay.	2	5	7	2	2
24	Technologies used in online learning help me write a good conclusion for an English essay.	2	5	7	2	2
25	Technologies used in online learning help me use a word processing program to type and format my essays in English.	6	3	9		
26	Technologies used in online learning help me effectively brainstorm to gather ideas before writing.	4	3	8	2	1
27	Technologies used in online learning help me write a well-organized and developed outline.	2	2	10	2	2

28	Technologies used in online learning help me revise the development and organization of my own writing.	3	3	10	2	
29	Technologies used in online learning help me develop my grammar.	3	2	5	8	
30	Technologies used in online learning help me develop my punctuation.	3	3	7	5	
31	Technologies used in online learning help me develop my spelling.	1	3	10	2	2
32	Technologies used in online learning help me develop my vocabulary.	4	5	6	3	
33	Technologies used in online learning help me to effectively write under time constraints.	3	4	10	1	
34	Technologies used in online learning help me identify and correct writing errors.	3	5	7	3	