STUDENT INTERACTION, ATTITUDES AND PERCEPTIONS IN ONLINE COLLABORATIVE WRITING

HUSNA FATIMAH BT DATO' MOHD GHAZALI

FACULTY OF EDUCATION
UNIVERSITY OF MALAYA
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HUSNA FATIMAH BT DATO' MOHD GHAZALI

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ABSTRACT

Students' perceptions towards online learning are significant as today's students have high expectations in their learning environment, which initially brings forth their willingness to cooperate during the engagement process. The study focuses mainly on students' attitude and perceptions towards online collaborative writing tasks, which indicate their preference in learning. Students' online interactions play an important role to determine if online community is able to achieve its goal. The objectives of this study are to determine students' attitudes towards online collaborative writing, analyse students' attitudes while interacting in online collaborative writing, and identify students' perceptions towards online collaborative writing. The findings from the questionnaire show positive results were meeting the individual needs of each student are crucial for them to become active, independent, alert and able to be effective learners. Positive students interactions will go beyond the classroom, good communication skills that the students learn from interactions will benefit them to develop learning and students' perception of online collaborative writing proves to be positive and encouraging. In this study, social online interactions may have affected the students' attitude and perceptions of their collaborations. The qualitative findings on four elements; exchanging ideas, clarifications, question, and compromising during online interaction showed a positive outcome. This study suggests for future research to explore more on the qualitative outlook of group interactions for peer feedback and the students' attitudes towards online collaboration authority in the product. It is in the hope of improving perceptions and satisfaction a much better learning environment can be developed. Keywords: Collaborative learning, online learning, attitude, interaction, and perception.

INTERAKSI, SIKAP DAN PERSEPSI PELAJAR TERHADAP PENULISAN ATAS TALIAN SECARA KOLABORASI

ABSTRAK

Persepsi pelajar terhadap pembelajaran dalam talian adalah penting kerana pelajar hari ini mempunyai jangkaan yang tinggi terhadap persekitaran pembelajaran mereka. Kajian ini memberi tumpuan terutamanya kepada sikap dan persepsi pelajar terhadap tugasan bertulis kolaboratif dalam talian yangmana memperlihatkan kecenderungan mereka dalam pembelajaran. Objektif kajian ini adalah untuk menentukan sikap pelajar terhadap penulisan kolaborasi dalam talian, menganalisis sikap pelajar semasa berinteraksi atas penulisan kolaborasi dan mengenal pasti persepsi pelajar terhadap penulisan kolaborasi atas talian. Penemuan dari soal selidik menunjukkan hasil yang positif di mana ia memenuhi keperluan individu setiap pelajar untuk menjadi aktif, berdikari, peka dan dapat menjadi pelajar yang lebih cekap. Interaksi pelajar yang positif akan berupaya pergi lebih jauh, berkemahiran komunikasi yang tinggi dan berupaya berinteraksi yang akan memberi manfaat kepada mereka untuk membangunkan pembelajaran. Persepsi pelajar terhadap penulisan kerjasama dalam talian terbukti positif dan menggalakkan. Dalam kajian ini, interaksi dalam talian sosial mungkin mempengaruhi sikap dan persepsi pelajar terhadap kerjasama mereka. Hasil data kualitatif dari empat elemen; bertukar idea, penjelasan, mengajukan soalan, dan bertolenransi semasa interaksi dalam talian menunjukkan hasil yang positif. Kajian ini mencadangkan untuk penyelidikan di masa depan meneroka lebih lanjut ke arah pandangan kualitatif mengenai interaksi kumpulan untuk maklum balas rakan sebaya dan sikap pelajar terhadap pihak yang berkenaan kerjasama dalam talian. Dengan peningkatan persepsi dan kepuasan pelajar, persekitaran pembelajaran yang lebih baik dapat dibangunkan.

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"And whoever fears Allah – He will make for him a way out and will provide for him from where he does not expect. And whoever relies upon Allah – then He is sufficient for him. Indeed, Allah will accomplish His purpose. Allah has already set for everything a [decreed] extend." Surah At-Talaq [65:2-3]

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CHAPTER 1: INTRODUCTION

1.1 Introduction

Evidence to support the technology advocates' claim on the 21st-century communication and information tools is booming rapidly. The technology is advancing every minute digital learning tools such as computers, laptops, smartphones infuse the learning environment. These digital technologies offer applications that can positively influence today's generation learning process, especially in increasing student engagement and motivation. Technology marshals in leading structural development in achieving improved productivity especially in teaching and learning.

Lou Holtz quote "Ability is what you are capable of doing. Motivation determines what you do. Attitude determines how well you do it". "*Ability is what you are capable of doing*" – this study the skillfulness or saviour faire on applying the technology tools to accelerate in learning. Technology is interactive and students learn by communicating, contributing, researching, creating and accepting feedback. According to Yücel and Usluel (2016) improvements in information building and communication mechanisms for the students can be seen in the engagement and involvement of the students. A positive mindset should lead to the ability to connect and communicate, understand and process knowledge effectively. This study determines the effectiveness of an online website in enhancing student writing skills at the same time develop their skills in writing collaboratively using digital tools.

"*Motivations determines what you do*" researcher wants to see what drives the students' interest towards the website, does the environment of the website enhance

students in learning. According to Ion, Barrera-Corominas and Tomàs-Folch (2016) students and teachers believe that feedback is helping students improve and grow their skills better. Peers engage mutual scaffolding in a small group where they will assist each other to improvise their writing skills. These interaction processes among peers stimulate the writer's confidence and develop communicative and collaborative competence.

"*Attitude determines how well you do it*" this research is to determine the students' attitude while they are interacting, collaborating, and write effectively. According to Belgrave and Jules (2015) "learners' attitudes can be formed as a direct result of the conditions which exist within the teaching and learning environment". Environment promote skills growth, motivate people to participate in different practices, and praise people for displaying beliefs and attitudes. Adequate learning environment is related to a wide range of knowledge and abilities such as collaborations, effective planning of projects, decision making, critical thinking and time management. With effective architecture of the collaboration environment, the students' perceptions and motivation towards learning will increase.

According to Eshghinejad (2016) attitudes of students such as emotions, values, likes, dislikes, desires should be taken into account as their attitudes affect their language learning. These attributes will definitely determine the students' the opportunity to function as member of the team and cultivate good communication skills while engaging website. Perception varies from person to person, it reveals levels of experience that the individuals have. It can be defined as the process of recognition and interpretation of sensory information. Perception allows an individual to respond to the information and make it into something meaningful. The motivation

of an individual depends on the fulfilment of three fundamental psychological needs: sovereignty, integrity and social interaction. The fulfilling of these requirements relies on the person's perception of the condition experienced at the particular moment.

This interpretation will be controlling the idea of acceptance in one's attitude. According to Kim, Chung, Lee, and Preis (2015) long-term positive interaction with basic psychological need encouragement and the resulting motivational results (intrinsic learning motivation) will precipitate into the longer-lasting motivational inclination of interest in the subject. According to Zheng, Yim and Warschaucer (2018) stated that prior computer-assisted language learning (CALL) studies, primarily conducted at the post-secondary level, have suggested that instructional exposure to social media will make it easier for students to exchange ideas and share information build their intellectual identity as genuine writers, increase their understanding of readers and authors, increase their trust in and enthusiasm for learning, and eventually encourage their learning skills and language growth. According to Ou, Davison and Wong (2016) the media network should improve the distribution of up-to - date information and ease the communication process. The massive advancement of the internet network has encouraged educators to use these technologies for university education processes to ensure the adaptability of new learning approaches in interactive online environment. The use of social networks as channels of communication is a big concern, as the social network is used mainly in education as a way of reinforcing existing social ties. (Manca & Ranieri, 2013). In addition, Sánchez, Cortijo, and Javed (2014) mentioned that social networks are essential for educational purposes and have suggested that social networking has been one of the big developments in academia in recent years. In fact, millennials of the twenty-first century have grown up with information technologies, making their

talents, behaviours, aspirations and behavioural patterns distinct from those of the past generation. Moghavvemi, Paramanathan, Rahin, and Sharabati (2017) stated that they have more options as to when and where to spend their learning time in educational settings, social, public or home schooling than their peers did ten years earlier.

1.2 Background of the study

In today's new age of technology, higher education institutions are placing great prominence on students' independent learning. Technology in the classroom has become more predominant both in teaching and learning methodology. Technologies have demonstrated a massive impact on today's education system. The technologies have a immense impact on the way students think, learn and interact with society. This widespread technology invasion has completely transformed how educators teach and how students learn. The technology invasion in a normal classroom helped shape new method on how people are interacting, collaborate and forming a new online community. Technologies have had a vast influence in shaping how people think, work and live. These influences may change an individual attitude, which will likely have a corresponding impression towards one's intention, cognition and behaviour. In addition, technology has a mutual association with teaching, this creates new learning opportunities and instructional digital tools.

Today, many universities require students to take accountability for their learning, they must be more self-directed, make their own decision, and experiment the best learning methods that will benefit them the most. This will allow students the opportunity to develop and enhance their skills towards interaction with their classmates. Education is entering a particularly critical stage that is mark by an urgent need to examine the role of digitally mediated and collaborative tools. Students'

attitude or perceptions will then lead to the advancement of online learning in education. Student attitude is of the most important factors that affect teaching and student motivation to learn. According to Ajzen and Fishbein (1977), attitudes refer to the ability to predict a person's behaviour towards certain targets, adding to this Ajzen (1991), described that "an attitude as a predisposition to respond favourably or unfavourably to an object, person or event".

This suggested that behavioural characteristics, such as social habits and personality traits, played a significant part in these efforts to predict and describe human behaviour. Student attitude or perception towards learning, either good or bad will affect their outlook concerning the process of learning throughout their life. Student perception is a mechanism in which sensory input is extracted from the environment and the information collected is used to communicate with the environment. Perceptions may affect the students' sense of acceptance and decision. According to Falls, Bahhouth, Chuang and Bahhouth, (2014), the perception of online teamwork among students can differ depending on the experience of the students within the community. Behaviours that foster student participation would likely lead to both better class attitudes and improved learning. According to Vaessen, Beemt, Watering, Meeuwen, Lemmens, and Brok (2017), perceptions have been affected by students ' prior evaluation experience, attributes and contact with teachers and other pupils. This means that any action requiring appraisal will be interpreted by students in a number of ways and hence has varying impacts on student learning processes.

Interactive online collaborative writing promotes collaborative, peer interaction and facilitates sharing, building, communicating and distributing ideas, views, suggestions and knowledge among group members. This process helps develop students'

reflective learning, increase their creativity and enrich their critical thinking skills. According to Stoddart, Chan and Liu (2016) collaboration is not just a community of individuals who together contribute to the finished product; the process itself is an essential facet of the collaboration process that takes place. Collaboration is not just a community of individuals who together contribute to the finished product; the process itself is an essential facet of the collaboration process that takes place.

Collaborative learning is where students learn to work together as a group to solve a problem or undertake a task in a group. Collaborative learning is a very diverse instructional activity because all the main factors that affect collaborative learning are group priorities, communication levels, culture and learning strategies. Collaboration and writing skills are so important and yet it appears to be a challenge for L2 learners. It involves inspiring and assisting students to learn how to communicate and write effectively before graduating particularly in collaborative scenarios which present several challenges. According to Yim and Warschauer (2017) in academic environments, collaborative writing skills are especially important: they are key both to accessing and integrating the learning community as well as to lead towards the knowledge-building process in academic fields.. Adebiyi, Akinbode, Okuboyejo, Agboola and Oni, (2015) stated that internet networking usually refers to the contact of people using different social media sites with the restriction of geographical and time restrictions. According to Yen (2016) social networking, such as linking, posting, receiving and engaging, and its audio-visual features may increase the variety of teaching approaches.

1.3 Problem Statement

Tertiary ESL students consider writing academic terms-papers a complicate task, grappling with academic writing standards and ethical problems (Rafik-Galea, Arumugam & de Mello, 2012). According to Alaga (2016) poor tertiary students have been shown to have a higher risk of failing in their academic results, particularly in English classes.. Al-Khasawneh and Maher (2010) reported that students tend to have a number of difficulties writing in English, for example, not understanding how to arrange their thoughts.. According to Ismail, Darus and Husin (2012) students and lecturers claim that the failure of students to think objectively and coordinate thoughts through their writing process influences the consistency of their learning. In addition, the willingness of tertiary students to sustain claims and create ideas for writing in English for academic purposes is critical to academic achievement. (Hassan, Nor, Rosly and Zakaria, 2019). Akhtar, Hassan, Saidalvi and Hussain (2019) stated that, eventually results in academic writing difficulties that have been connoted for students to master, and it is not an easy ability to acquire especially in a second language. These difficulties and obstacles encountered by students lead to negative perceptions of the English language. Attitude plays a significant part in second-language instruction, as it is primarily determined by learners' own behaviours. Writing has proved to be the most challenging job for ESL students, and this is the primary reason that ESL students have pessimistic views and opinions towards learning in English. (Yusof, Jusoh & Yusof, 2019). Aktar et al. (2019) stated that negative attitudes and lack of enthusiasm can contribute to challenges in learning English.

A technique called collaborative writing can lead to innovative approaches to projects, discoveries, sharing ideas, suggestions for varied solutions. It is important, because successful collaborative learning requires not just the participation of the

students, but also the way the community works together to make contributions. Collaboration and interaction trends in collaborative learning can influence learning objectives, and thus cannot be overlooked when evaluating impacts on collaborative academic achievement. (McNely et al., 2012). According to Fung (2010) one strategy to enhance social interaction between learners in the writing class is to engage them in collaborative writing or group writing activities. It is by collaborative interaction during writing activities that linguistic awareness is built up as students concentrate their efforts on conveying their message.

Students' levels of dissatisfaction (attitude) toward workload management, miscommunication, output quality, and time management are some of the many reasons why conflict arises in a collaborative task. The problem of the learner's mindset is identified as among the most significant influences that have a massive impact on language learning. According to Belgrave and Jules (2015), the attitude of the learners can be influenced by the direct consequence of the conditions in the teaching and learning environment. There are factors in learner behaviour which would be important in an effective learning environment, regardless of whether or not such environments are introduced by educational technology. In addition to the attitude and teaching and learning environment, Li and Zhu (2013) stated that the collaborative writing method for a small group of Chinese EFL students defined five forms of writing changes: extra, elimination, rephrasing, reordering and correcting. Interaction and collaboration are more likely to take place in an environment where students have the authority over their assignments and activities. The condition will influence the attitude of the learner. According to Belgrave and Jules (2015), a pessimistic mindset may impede language learning but, on the other hand, a positive attitude may lead to excitement and may affect their success in the acquisition of the desired language.

Furthermore, Eshghinejad (2016) argued that the attitude of students, such as emotions, values, likes, dislikes, wants, should be taken into account because their attitudes affect language learning.

According to Rhema and Miliszewska (2014), positive learning environment and success goals impact student satisfaction and performance expectations render the largest contribution (total effect) in learning satisfaction.. Furthermore, Li and Zhu (2013) indicated that wiki-mediated engagement affects student writing quality and learning experience. The Wikispaces classroom allows users to upload and edit text and document history through a comprehensive archive page that provides unrestricted sharing, peer review and sharing of ideas. Online collaborative writing has become essential in teaching and study in English. The interaction of students during the collaborative process has been an emerging concern after online communication was implemented in the field of education. In this study Wikispaces classroom was introduced as a platform to help enhance the students' potential in collaborative writing. Collaborative learning not only encourages students to develop the ethic of reverence for others, but also enhances their academic performance (Sung & Hwang, 2013).

In using wikis, the students do not only learn to write collaboratively but they are also trained to build a sense of community and teamwork in completing tasks such as negotiating with others to agree on correctness, meaning and relevance. Identifying the possible problems faced by students in the writing task, this study aims to provide a solution to overcome these challenges: by exposing the students to collaborative writing activity via the Wikispaces Classroom website. Self-paced flexibility gives students choices in where, when and how they learn. It shows that students are more

comfortable accessing the assignment from their rooms. The benefits of online collaborative writing technique are abundant as discussed in the Literature Review Chapter.

It is, however, imperative for research to be done into the perception and attitude of the participating students towards a particular technique. Students' perceptions towards online learning are significant as today's students have high expectations on their learning environment which initially brings forth their willingness to cooperate during the engagement process. Failure to acquire the sustainability of students' motivation will affect the students' level of interest towards the lesson, interaction with the topic, with the educators and peers. According to Li and Kim (2016) in their findings, collaborative writing in either face-to-face or computer-mediated settings, has explored changing patterns of peer interaction across writing tasks. This study is to provide insights into online interaction in groups of collaborative writing focusing on the students' attitude and perceptions.

1.4 Aim of the Study

It is imperative to understand how learning occurs and the elements that contribute to the learning process. Attitude towards collaborative writing tasks will definitely showcase the students' preference in learning. The aim of this study is to identify the perception, and attitude of the students towards online collaborative writing during the

process of collaborative writing. Students' perceptions of online collaborative writing are essential to identify its effectiveness and the learners' receptiveness of the writing technique. With the information gained from this study, it will shed some light on the need for the creation of a more independent learning environment where flexible individualized learning is made possible.

1.5 Objective of the Study

The objectives of this study are to:

1. Determine students' attitudes towards online collaborative writing.
2. Analyse types of interaction students use among group members in online collaborative writing.
3. Identify students' perceptions towards online collaborative writing.

1.6 Research Questions

The research questions of the study are:

1. What are students' attitudes towards online collaborative writing?
2. What types of interaction do the students use among group members in online collaborative writing?
3. What are students' perceptions towards online collaborative writing?

1.7 The Limitations

Unfortunately, the main limitation of this study was time. The university study terms are only 14 weeks per semester. Time is crucial for this study to ensure the outcome and the findings are substantive. The topics were introduction and literature review.

A small number of participants were another factor that contributed to the limitation of the study. The population of this study was two thousand students but only 215 first-year foundation students were chosen. Purposive sampling has been used for this analysis. Purposive sampling is a non-probability sample, selected by the researcher based on the characteristics (accessibility and expertise with using the Wikispaces classroom website) that satisfy the objectives of this research. The results of this analysis should not be generalized.

1.8 Terms

The following are the terms used for this study. The terms reflect the crucial elements that will be highlighted throughout this study.

1.8.1 Technology

Technology in the language classroom would immediately bring our thoughts to computers and handheld devices; expand the experiences with new learning material in building 21st-century skills such as increases motivation, learning engagement and accelerates learning. According to Harrell and Bynum (2018) students today are called digital natives and are absorbed constantly in the field of immerse technologies such as smartphones, iPods and on-demand channels, among other unlimited tools that offer the answer to every question with just a few clicks of a keyboard or screen taps. This is a technology that defines the application and effect within the social context in which these emerging technologies are adopted and most specifically, applied. In addition, Coombs and Bhattachary (2017) stated that the Internet provides strategic thought and learning, related to the creation of logical thinking scaffolds, to promote learning in dynamic learning environments. Technology ushers in fundamental structural development and changes to support both teaching and learning. Online learning connects educators with their students in professional content, information and resources to develop their interest in learning.

1.8.2 Wikispaces Classroom

Wikispaces Classroom is a social writing platform for education. The website manages all the activities such as resources, conversations, and projects in the classroom for the teachers and students organizing and working together. According to Yusof and Basar (2017), anyone can simply navigate a wiki via a web browser without the need to install extra apps, making it readily available to those with an

Internet connection. According to Banna, Lin, Steward and Fialkowski (2015) new tools for active learning, such as message forums, messaging rooms, blogs , wikis, community assignments, or peer analysis, have been influential in fostering student-to - student engagement in online classes.

1.8.3 Online Learning

The internet has become a new instructional medium for education. Online learning eliminates the difficulties of the traditional classroom. It offers interactive communication which is at an advanced level of the digital world. The development in technology offers conveniences especially offering long-distance education programs to everyone. This will help to increase the interactivity between students and teacher. According to Yusof and Correia (2018) added that online learning occurs when learner engaged in the process of learning with one's comfort. In addition, Rahamat, Shah, Din and Aziz (2017) added that students are physically, socially and competently trained to use ICT in school.. Today there is a massive appetite from people for online learning. It offers an unparalleled ability to turn the school system into a student-centred environment that can be affordably adapted to specific student interests by empowering all students to study at their own speed and direction.

1.8.4 Collaborative Learning

Collaborative learning is an attempt that two or more individuals try to learn or accomplish something together. Collaborative learning is where a collaborative exchange has taken place, involving a network of learners and teachers, and is often a place where group members share their expertise and information. According to Zhu (2012), reported that collaborative learning is a collaborative activity that includes a group of learners and teachers, where participants study and exchange information or

expertise. In addition, Cheung and Vogel (2013) stated that these technology and methods are being developed and made easy to incorporate, understanding the actions of interactive technologies is important, as acceptance is a prerequisite for student involvement. It is where learning is an active process. Students are able to integrate the information and apply the new information to the task given. Students benefit when they exposed to diverse viewpoints from the group members.

1.8.5 Collaborative Writing

Bear, Estrem, Fredricksen and Shepherd (2014) mentioned that a core feature to most writing courses is the emphasis on learning, both drafting and editing, which encourages students to learn, discover, engage in ideas and solve problems. This collaboration will also foster strategic thinking as students are motivated to coordinate their opinions and suggestions to provide constructive input on the progress of the final product project. According to Ranjbar and Ghonsooly (2017), collaborative writing skills encourage learners to think about the language, explore the language they use, and help each other find a solution to the linguistic question they experience. Collaborative writing in this analysis focuses on the writing of the introduction paragraph and the writing of the literature review. Students at universities have indicated that earlier in the problem statement they face difficulties in writing, particularly academic writing. Brodahl, Hadjerrouit and Hansen (2011) stated that alternative collaborative writing applications can require sequential editing and allow users to collaborate in real-time, especially throughout their online discussions.

1.8.6 Interaction

Interaction is where individuals exercising mutual control over each other during social encounters. It is a skill inherently needed to collaborate effectively. According

to Neumann and McDonough (2015) interaction plays a significant role in knowledge-building by providing incentives for learners to receive guidance from professionals or actually express actions in the problem-solving process by internal or external expression. Interaction between learners is highly beneficial for online learning and contributes to student participation. (Martin & Bolliger, 2018). Furthermore, according to Yusof and Correia (2018) interaction in an online environment can be categorized into four main categories: learner-instructor interaction, learner-learner interaction, learner-self interaction and learner-content interaction. Learner - learner interaction will be the main focus of this study. This type of interaction usually between the students themselves either on an individual basis or on a group basis which involves talking, listening, viewing, emailing and posting ideas, comments in discussion boards. According to Akbari, Simons, Pilot and Naderi (2017) believe that deep learning will take place in an online setting where students give and receive input from each other in a relaxed, stress-free and individualised atmosphere. Providing peer feedback will improve students in their writing skills (Cho & MacArthur, 2011).

1.8.7 Attitude

Attitude influences one's responses to a situation, incentives and condition. Personal attitudes are an important factor that affects individual usage of information technology. According to Kalayci and Humiston (2015) considering user perceptions of online learning tends to create an efficient e-learning environment for teaching and learning. Chen and Huang (2012) reported that understanding student behaviours would further broaden the functions of the e-learning system and meet student expectations, enhance learning effects and increase learning quality. According to

Bacay, Dotong and Laguador (2015) attitude is known to be an essential part of the learning cycle that influences actions to behave positively and it guides the development of certain character to respond to do something remarkably based on the point of view that drives the feeling to take actions. Hasler-Waters and Napier (2002) stated that, elements of trust, communication, organization and resolving conflict were identified as most important among forming a successful online relationship. This defines the importance of attitude in this study.

1.8.8 Writing Skills

Writing in English has always been a challenging task for ESL second language students. Difficulties in writing will become more severe at the tertiary level, where students are required to write more mature and sophisticated to suit their assumed level of intelligence (Ismail et al., 2012). Low proficiency in the language is one of many reasons students fear to write in English. Students struggle to perform successfully, especially in academic writing. The vast majority of Malaysian tertiary learners considers reading, translating and critically assessing the academic text the cornerstone of a lot of tertiary studies, clearly daunting, particularly when they face the challenge of expressing their comprehension in written or spoken form (Nambiar, 2007).

ESL students do not like writing in English and have a bad performance due to deprived understanding of the language, so they then to suffer failure (Shafie, Maesin, Osman, Nayan & Mansor, 2010). Fung (2010) discovers that in the writing method, exchanges with group members, may help students learn from peers, exchange information and make collective choices, use tactics and cope with disagreements. According to Hojeji and Hurley (2017) claimed that Paring students with various capabilities encourages all learners improve each other's writing skills.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

As technology advances at a growing pace, it is important to consider how it transforms or impacts the learning experience. Technology has grown tremendously in higher education and curriculum analysis has demonstrated that there are many approaches to incorporate the application of technology into classroom instruction, which in effect motivates students to learn. The method of teaching and learning would not only turn out to be stimulating and productive, but would also help to improve access to education and strengthen the importance of education. (Rahamat et al. 2017).

2.1.1 Background

The literature on this topic is large and growing, the subcategory of research literature dealing with ESL student attitudes toward technology and web-based computer-mediated is still small. This study mainly focused on students' attitudes towards collaborative writing in an online classroom, students' interaction during the collaboration and their perception towards online learning. According to Gitonga, Muuro and Nzuki (2014) since the introduction of technology such as Wikispaces, also referred to as information-building environments, it is important to examine their use in today's university setting in either fostering knowledge-telling or integrating knowledge in the knowledge-building phase.

2.2 Wikispaces Classroom

Wikispaces Classroom is a free learning platform. According to Reid-Griffin and Slaten (2016) mentioned that Wikispaces allows users access to materials as long as the wiki is kept active, a benefit for both instructors and students. Writers are encouraged to view resources and to continue reading, communicating and interacting with colleagues while working in their own secondary classrooms. Teamwork, community building, collaborative initiative and individual responsibility are also important to the successful use of wikis. It is a collaboratively authored, searchable document which is linked internally and externally. Integrating social networking technologies in education is important to support language learning. Wikispaces Classroom website has the potential learning in cognitive and mechanical interaction in reading, creating and editing. Online classrooms are using software e-tools to scaffold students in all their tasks. It is to provide the support that the students will need when facing complex tasks at hand. Motivation scaffolding promotes motivational factors such as student self-efficacy, flexibility, communication, competence, and understanding of the importance of the target task. (Belland, Kim & Hannafin, 2013).

In Wikispaces classroom it allows teachers to engage in discussions online. According to Gavgani and Majd (2012) students tend to study and exercise specific subjects and skills pragmatically in a simulated electronic / online world rather than a physical room and allocated time. The editing process in the wiki classroom is straightforward as all changes are archived, enabling teachers and students to watch the writing in progress. Wiki benefits for various applications of learning systems have been extensively explored and reported of blended learning schools, and the findings indicate scope for progress in education despite drawbacks. According to Gitonga et

al. (2014) pointed out that students should also share their thoughts and discuss a balance between personal ideas and ideas from others. As a consequence, they are able to carry meaning information to others. All students tend to be genuine contributors to the common aims of their communities through their online collaborative work. Students may learn about each other's perspectives and thoughts by engaging in a group project. Continuous information building and constructive use of authoritative sources and a constructive attitude against them. According to Brodahl, Hadjerrouit, and Hansen (2011) the benefits of wikis for a number of different applications and their use in learning systems have been widely researched and recorded in schools, distance and mixed learning, as well as the possible vulnerabilities and crucial challenges associated with their use. According to Wood, Burner and Ross (1976) scaffolding is supposed to occur when a more experienced adult helps a learner excel in activities that may otherwise be beyond their control. Scaffolding among students helps build strong online collaboration among group members. Hudson (2018) added that in practice users do not need to spend time learning professional knowledge in the writing, drafting, and production of a wiki web page; rather, they may concentrate on the actual content of their writing instead. Using wikis in writing instruction activities the students' audience awareness increased. This website offers learning experience from peers in a simulated networking atmosphere with low anxiety.

According to Kear, Donelan, and Wiliams (2014) examined perceptions of students and tutors, with a view to exploring the usefulness of the wiki in facilitating student communication and tutoring. They used the core TAM approval model criteria and found that utility and ease of use were crucial factors in students' adoption of the wiki, and that external impact and inner motivation were also significant factors.

The researcher believed that wikispaces classroom may help to scaffold students' collaborative writing through a platform of sharing, peer-feedback. Scaffolding, a framework originally intended to represent that more advanced peers would support low-level learners. Wikispaces classroom offers new online collaborative experiences for the students. According to Pelekis and Phillips (2017) the technology offered makes it possible for students to add other creative components to their writing, such as audio, photographs, graphics and slide shows, as well as to learn from a variety of online multimedia resources. Therefore, it is essential to see if Wikispaces classroom can contribute in scaffolding online writing and build community through online interactions.

2.3 Online Learning

The goal of today's educators is to use technology to improve individual learning as well as to achieve universal education, and to allow technology to fit with its individual approach to education. Technology, with distinctive characteristics such as versatility, connectivity, personalisation, spontaneity and ubiquity, is commonly used to promote language teaching and learning. (Wu, Hsieh & Yang, 2017).

Since the growing use of networked computers, study has started to look into how networking promotes greater equity in the classroom by breaking down hierarchical power systems and encouraging equal engagement among ESL students based on their writing skills. According to Yusof and Correia (2018) added that self-discipline is important to promote engaging and sustainable learning. She mentioned in an online learning environment, effective communication and interaction are equally important so that they will not feel that they will be left alone, unguided. Online learning has positively improved language proficiency. The cycle of teaching and learning would

not only turn out to be stimulating and productive, but would also serve to improve access to knowledge and enhance the importance of education. (Rahamat et al., 2017). According to Yusof and Correia (2018) mentioned that online learning offer advantages to students; online interaction promotes interactions between students across regions with different views and opinions in solving problems. This allows the students an opportunity to learn the way the others think and at the same time build their creativity, be critical and innovative. Another advantage is where online learning allows students to take up research seriously as they will be more engaged in planning and executing their ideas in the form of research. Many of these skills will be picked up throughout well-planned activities. Students will need to cultivate the habit of reading more journals, books, and references. There are no face-to-face confrontations and thus it does not limit their experience in gaining knowledge. Many students will feel awkward to pose a question in a classroom setting but are more receptive to the idea of online communication. Online learning can play a crucial role in helping students develop their expertise and gain skills that promote students' incorporation into dialogue groups or unique areas of experience.

This research proposes practices such as community building and group assignments integrating electronic exercises, engaging ESL students in events in which students can improve writing skills in coordination and partnership with different individuals. According to Junco, Heiberger and Loken (2011) stated that given the increasing usage of social media by students and the growing use of social media by teachers, relatively little longitudinal data is available on the effect of social media use on student learning and interaction. In addition , students are becoming much more knowledgeable about the subject than reading from a textbook through the development of their own learning resources, a sense of pride in being able to complete

a project or carry out an investigation, increased technical confidence and better learning through its use. (Rahimi, Berg & Veen, 2015). Knowing the perceptions of students towards online learning is crucial; this is to improve online learning of its usage and effects. It is significant to investigate the students' attitude towards online learning in order to understand how to improve online learning satisfaction in order to elevate learning techniques effectiveness. According to Powell, Watson, Staley, Patrick, Horn, Fetzer and Verma (2015) stated that online education uses technologies to change what is possible in teaching and learning. Such new learning models are designed to allow better student-teacher contact and engagement, either synchronous or asynchronous, and to maximize and student's learning experience via comprehensive, customized learning. According to Xu, Huang, Wang and Heales (2014) found that personalised interactive online learning environments increased student success, motivation and self-efficiency relative to non-personalized virtual learning environments.

In online learning, students are not passive vessels to be filled with information, as an alternative, they definitely become active learners. According to Gilbert (2015) online learning allows students to work at a time and location that is consistent with their academic needs. According to Powell et al., (2015) online training and learning are developing as rapidly as the new technologies that provides the catalyst for personalization. It is important to remember the inherent advantages of integrating online learning with the face-to - face environment. They explained that, with this versatility, students are free to work at their own pace and have a preference as to the way along which they would choose to show their mastery of learning. The preference of students results in enhanced participation and a greater comprehension of content. According to Wichadee (2014) students are able to create online resources that

represent what they have experienced and display connexions between their previous knowledge, course content and personal experience.. The researcher believed in this study it will show the process of learning will happens through discussions, reflections and collaborative group work will lead to critical thinking within the community itself. Learners are a member of a learning community constantly evolving, expanding, creating and engaging in reciprocal learning activities. Through online learning they will be sharing ideas, knowledge, information, exchanging views and the experiences will bring meaningfully.

2.4 Collaborative Learning

To note there are many benefits of collaborative learning. A central feature of collective learning is that learners should be motivated to draw on their skills (Brodahl, Hadjerrouit & Hansen, 2011). Vygotsky (1978) reflects on scaffolding, with an emphasis on the role of social interaction in learning and on the principles underlying the communicative approach to learning in L2.According to Vygotsky, human development is inherently a socially situated activity.

"A child's (novice) cognitive development arises in social interaction with a more able member of society. The more able member (expert), by providing the novice with the appropriate level of assistance, stretches the novice beyond their current level towards their potential level of development". Vygotsky (1978)

This assistance is more widely referred to in the literature as scaffolding, and can also occur between peers while employed in group / pair research. Online discussions have the potential to participate in students critical thinking related to the issue at hand. This gives the opportunity to the students to discuss further and come up with several solutions to the issue. The potential of a computer-supported environment and its

planning tools to assist students to carry out complex collaborative writing tasks and at the same time increase the amount of interaction occur both face-to-face and online discussions. Today, the educational paradigm has moved towards student-centred learning. The technologies have been introduced and integrated into the educational environment and various learning methods have been introduced to the students. Storch (2013) emphasised that teamwork requires a concerted attempt between individuals to accomplish a assignment together during the writing cycle, involving a shared approach to the preparation, creation of suggestions, review of the document structure, revision and editing.

In compliance with Yücel and Usluel (2016), mutual views are checked and debated by other group members in a collective atmosphere in which all group members share their cognitive obligations. They added that, in the process, opinions are expressed as categories in the sense of literature and illustrations, and information systems are built from current environmental opinions. According to Redes (2017), interactive learning provides unique learning experiences for students to improve self-critical thinking, to develop useful leadership and team skills, to engage in task-oriented working groups and even to co-learn with the key objective of community learning tasks and curriculum style. Sung and Hwang (2013) observed that studying together not only helps students to develop the sense of reverence for others, but also enhances their studying success. Online interaction can inculcate positive results in communication systems that are constantly interconnected with daily life. The internet and social media have a vital role to play in establishing an active and important communication channel. Interaction from the online community, learners are able to develop their communication skills with their teachers and their group members. Students stand a greater chance of creating their own awareness, since a lot of learning naturally takes

place within a social framework. This method includes creating shared trust between the two parties. According to Horn and Little (2010) collaboration with colleagues strengthens their collaboration potential, both by promoting and fostering an integrated cycle of professional growth through continuous access and exchange of experience and skills. Students will increase their contact with teachers and school members; in addition, they will increase their chances of improving their own expertise, as much learning will eventually take place within a social setting. Online technologies allow for a broad variety of evaluation approaches that can be used to test learning: chosen response evaluations, built response evaluations, simulated conversations, concept analysis, and sharing of ideas. Nevertheless, the degree and scope of participation in collaborative learning varies among students; and instructors teaching instructional design programmes can find it difficult to promote the production of collaborative learning among student instructional designers (Brill, 2016). According to Aydin and Yıldız (2014) writing instructors are not only responsible for emphasizing accuracy informal language but they should also attend to the establishment of meaning by providing their learners with meaningful context and authentic purpose for writing. They also added that peer editing and collaborative writing also allows authors to share thoughts and expertise and helps them to collaborate together for a successful utilization. Gallotti, Fairhurst and Frith (2017) stated that working together to accomplish common interests is just one of the many contexts in which people's minds and bodies are separated into social experiences. Two agents reciprocate thoughts and interactions in a certain manner – whether cooperative or aggressive, pro-social or antagonistic – they have access to information relevant to each other on the basis of the sharing of knowledge between communicating agents, rather than on the fact that there is a common objective to be achieved collectively, which sets the criteria for

identifying contact as social. The depictions of jointly communicating subjects are, as a rule, made intelligible by the definition of their motives and motivations as reflecting a desire to achieve a shared purpose together. Mutual goals have since become the institutional framework for mutual participation in collective action and social cognition studies (Sacheli, Lucia & Aglioti, 2015). According to Law, Chung, Leung, and Wong (2017) collaborative learning offers students a chance to participate in debates and take responsibility for their own learning. In addition, Maina, Wagacha and Oboko (2017) the method of collective learning was the use of group work to learn a task. Collaborative writing is complex activities that have different means of communication between the writers. It is therefore hoped that this study would demonstrate that collaborative learning is good for the young generation as it leads to cultivating a positive attitude among students. Collaborative learning was grounded in three scientific frameworks: human growth theory, psychological interdependence theory, and cooperative interaction theory.

2.4.1.1 Degree Approach

In this analysis, the Degree approach was used to evaluate student experiences during online collaboration. Barros and Verdejo (2000) introduced the Degree approach to investigate the students' interaction process.

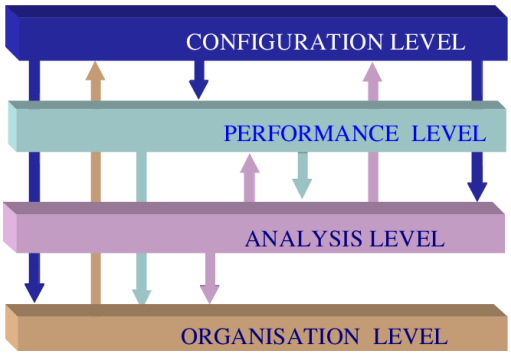


Figure 2.1: Degree Approach (Distance Environment for Group Experiences)

The device architecture called DEGREE acronym Distance Environment for Group Experiences is divided into four levels: configuration, performance analysis and origination level. (Barros & Verdjo, 1999). The fine points from Barros and Verdjo, (2000) are as follows;

- ***Configuration Level***. Once the teacher(s) have planned the experience of collaborative learning, on this level they can configure and install automatically the environment needed to support the activities of groups of students working together. The environment will provide the resources needed for carrying out joint tasks. In the configuration level, teachers specify tasks, resources, and groups, either by starting from the scratch or reusing generic components.
- ***Performance Level***. This is the level where a group of students can carry out collaborative activities with the support of the system. Activities may involve a variety of tasks with associated shared workspaces. Collaboration is conversation-based. The system manages the users' interventions, named contributions, supporting the co-construction of a solution in a collaborative argumentative discussion process. All the events related to each group and experiences are recorded. They can be analysed and reused for different purposes in the analysis and organization levels.
- ***Analysis Level***. In this level, we analyse the user's interaction and make interventions in order to improve them. We offer tools for quantitative and qualitative analysis for observing and analysing the process of solving a task at the performance level. In the analysis level, we propose a way of observing and value the users' attitudes when they are working together. We offer the possibility of intervention by sending messages to the group or

to individuals explaining how to improve different points of their work. Finally, we register the messages and the moment when we make this intervention and analyse the improvements.

- ***Organisation Level***. Here we gather, select and store the result of collaborative learning experiences and the processes. The information is structured and valued for searching and reusing the proposes. This information is stored as cases forming an Organisational Learning Memory. We offer functionalities for defining, searching, collecting different cases, and for defining links to work material in the configuration level for related tasks.

The basic principle by Barros and Verjdio (2000) were applied to this study. Their Degree Approach has been applied to many other studies pertaining to interaction, communication basis using online principle. For this study, researcher will only focus on two levels; performance and analysis level.

2.4.1.2 Taxonomy

(a) **Bloom Digital Taxonomy**

Bloom's Digital Taxonomy (revised by Andrew Churches) 2010 reflects on the use of technologies and interactive resources to promote learning. This kind of student interaction is characterised with power verbs that can be used for almost everything from class planning and heading creation, to curriculum mapping, and more. These verbs which cover the span of the taxonomy from LOTS (lower-order thinking skills) to HOTS (higher-order thinking skills), as for evaluating tasks there are six elements there are: creating, evaluating, analyzing, applying, understanding and remembering. Churches (2010) have merged the Revised Taxonomy into the Digital Age by adding

Web 2.0 technologies to each level. Digital Taxonomy shows the potential for insight and higher-level cognitive skills and teamwork is significantly crucial especially in 21st century where one is used in the learning process.

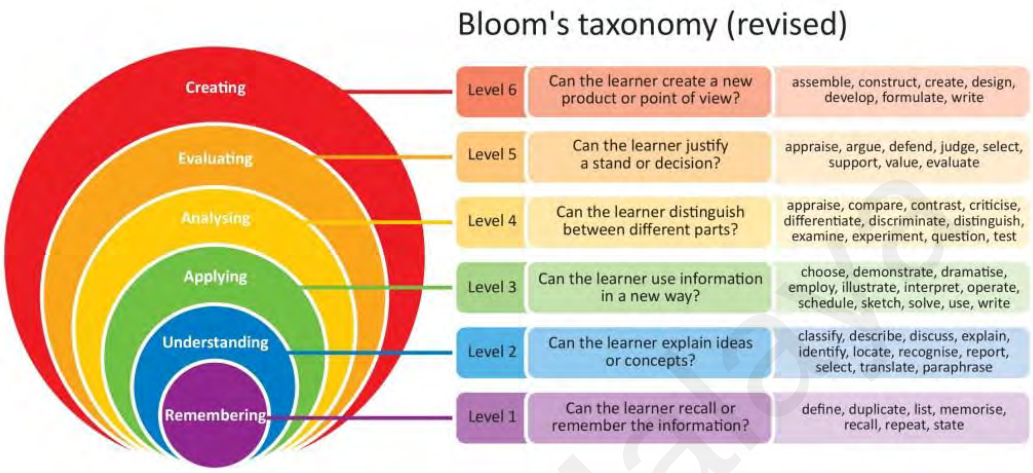


Figure 2.2: Bloom's Digital Taxonomy (revised)

i Creating can a learner create a product or point of view

ii Evaluating can a learner justify a stand or decision

iii Analysing can a learner distinguish between different parts

iv Applying can a learner use information in a new way

v Understanding can a learner explain ideas or concept

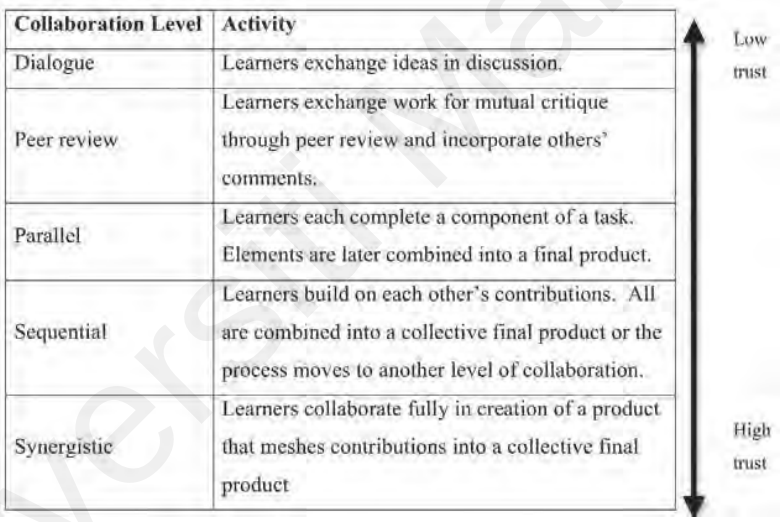
vi Remembering can a learner recall or remember the information

Bloom's taxonomy is a valuable method for creating effective learning goals and therefore digital education. It is a cycle of moving from basic to more complex thought skills. The basic principle of Bloom's taxonomy is that lower levels of awareness support higher levels of taxonomy. Doyle and Senske (2017), for example, have to consider the distinction between the various methods of digitally building a 3D surface (comprehending) before selecting which type of 3D surface to choose (applying). However, in terms of teaching methods, the specificity of the learning goals resulting from Bloom's digital taxonomy will help to inspire the level of student success that is sometimes missing in web design classes, such as creative approaches and well-crafted insightful representation. According to Lau, Lam, Kam, Nkhoma, Richardson, and Thomas (2018), learning at various levels will be more successful with the help of adequate earning tools. For low-level learning, tools that make it easier to recall and comprehend accurate facts may be necessary. In higher-level learning, however, tools that promote research and assessment are required to help users gain conceptual and functional skills.

Nevertheless, the ability to use taxonomy to better identify learning opportunities and promote the various phases of the cognitive cycle, from low-level and high-level learning, is also minimal. It makes it possible for students to learn and comprehend concepts efficiently, it also encourages students to develop it strengthen interpersonal skills and promote constructive interdependence. For this study the researcher will focus on two elements from the Bloom Digital Taxonomy (revised); evaluating and analysing.

(b) **Taxonomy of Collaborative E-Learning**

To determine student relationships with other party members, the researcher used multiple taxonomies. The Collaborative E-Learning Taxonomy introduces a modern analytical structure for considering the extent of cooperation. This process will be used to schedule, coordinate and analyse e-learning events so that learners understand how to accomplish mutual outcomes. The Taxonomy of Collaborative E-learning activities is grounded in the results of a qualitative study that explored an in-depth view of instructors' perceptions of teaching with online collaborative methods and descriptive examples of their approaches.



Collaboration Level	Activity
Dialogue	Learners exchange ideas in discussion.
Peer review	Learners exchange work for mutual critique through peer review and incorporate others' comments.
Parallel	Learners each complete a component of a task. Elements are later combined into a final product.
Sequential	Learners build on each other's contributions. All are combined into a collective final product or the process moves to another level of collaboration.
Synergistic	Learners collaborate fully in creation of a product that meshes contributions into a collective final product

Figure 2.3: The Taxonomy of Collaborative E-Learning by Salmon, 2008 (Levels of Collaboration).

Creating authentic learning experiences for students is an important part of online learning. The range of technology web tools offers online make collaboration, innovation, creativity, and individual development is tremendously amazing. To create online collaborative writing, the researcher applies Blooms Digital Taxonomy for evaluating the digital task. Egbert, Chao & Hanson-Smith (1999) have discussed

eight conditions for optimal language learning settings, most of which can be fostered in a chat: opportunities for interaction and exchange of context, contact with authentic audiences in a target language, student participation in authentic activities, access and motivation to varied and innovative languages, input, metacognitive direction, and optimal anxiety or tension. Digital interaction are close to face-to-face encounters where dialogue elements contribute to agreements, remedial input, information sharing and explanation.

Students are able to identify and interpret the signals that can strengthen their communication skills. For this study, the researcher will be focusing on two elements; dialogue and peer review.

2.5 Writing Skills

According to Nunan (1999) ESL learners struggle to write in the target language, which is different from their first language, but the challenge becomes much more difficult as these learners are required to compose well-developed and almost effortless prose. Writing is a dynamic analytical activity requiring multiple components some of which may be difficult for the students. Majority of the students do not possess the skills required to communicate effectively in a written format. According to Defazio, Jones, Tenant and Hook (2010) from the student's point of view, learning can often be a laborious and often dreaded exercise in attempting to place thoughts on paper while acquiring mastery over the laws of language, such as pronunciation, quotation form and grammar.

Ismail et al., (2012) stated that, students would choose to participate in online writing programs that not only direct them to become effective writers through the introduction of an effective writing curriculum and activities that not only help them

develop their critical thinking and other essential activities in writing, but also allowing them to develop skills at their own speed and time. Generally many of university ESL students have basic understanding of the rules of grammar unfortunately not all of the students able to write academically. With the rapid growth of online technology and environment there are new opportunities for expanding knowledge through collaboration during writing process. The researcher believed that online collaborative writing, offers better opportunities for students to collaborate and interact with each other while completing their written task.

This will not only help students with low proficiency level to gain confidence with the help of other group members who will scaffold them during the process of writing. Hyland (2013) argued that scholarly writing has become an field of concern due to growing engagement in higher education, quality teaching audits and, eventually, the rise of English as an foreign language of study and scholarship.

2.6 Collaborative Writing

Writing via social media is potentially particularly helpful for L2 learners, as these platforms will provide students with communicative opportunities to practise their English Writing in meaningful and inspiring ways (Zheng et al, 2018). Developing creative writing skills as an essential pre-requisite for comprehensive co-authoring in most academic and career settings (Yim & Warschaucer, 2017). According to Storch (2011), collaborative writing is a collective production or co-authoring of a text by two or more authors. He found out that the shared ownership of the paper created is the distinguishing characteristic of collective literature. The evolution of collaborative writing in education can be directly related to technology. On the basis of this Vygotsky, the cornerstone of collective writing was based on the notion of needing to

collaborate with others by sharing ideas for better learning and development (Heidar, 2016). According to Giroud (1999) collaborative writing as a learning process in which students in small groups create and compose text together. Collaborative writing skills are particularly crucial, especially in an academic environment. Collaborative writing contributed to knowledge building and learning. According to Zhu (2012) online collective written tasks, group conversations, conversations and statement analysis, students can enhance information construction.

The use of peer feedback in the learning environment gives several advantages such as increasing new learning, building an online community through interaction. Data exchange and reviews give students the ability to provide direct input. According to Oxnevad (2013), when working together, students create online materials that illustrate what they have experienced and demonstrate connexions between their previous knowledge, course content and personal experience. In an attempt to capture the different forms of collaboration, these experiments are also carried out in naturalistic environments by studying how writers collaborate or by using self-reported evidence, such as interviews or surveys of writers involved in collaborative writing (Yim & Warschaucer, 2017). In turn, Reid (1993) argued that one of the most critical influences influencing the success of college students is their interest in and disposition towards teaching. Ismail et al., (2012) suggested that many students have negative attitudes about writing: they frequently procrastinate, are negligent when studying, and are sluggish and disinterested in learning. Using technology in writing lessons will help develop an interest in writing. Presenting the audience in that community of writers attaching the importance of feedback will reduce the stress of writing and enhancing help among peers. According to Li and Kim (2016), all higher and lower-level peers will have resources for learning if they show a constructive approach,

exchange shared insights and make comparable contributions to writing. Yim and Warschauer (2017) claimed that collaborative writing skills are especially valuable in academic settings: they are central both in reaching and engaging in the research environment and in contributing to the knowledge-building process in scholarly disciplines.

In their research, Li and Kim (2016) reported on the engagement between two ESL groups during collaborative writing tasks in which, after analysing the nature between peer interaction they found that small groups take different approaches to both task communication and text creation while collaborating on writing tasks. Studies that examine collaborative writing processes typically concentrate on the techniques, behaviours, positions and responsibilities of the collaborators, as well as on the relational framework underlying writing activities (Yim & Warschauer, 2017).

According to Zheng, Yim and Warschaucer (2015) stated that online conversation in the microblogging community was used in the fifth grade classroom to promote writing practises by different students. Using a mix of qualitative and quantitative research methodologies such as statistical analysis, social network analysis and content analysis, Zheng 's study indicated that students increase their participation in online writing events over time, with the highest growth in participation among English-language learners. Students' engagement in the online debate has had a positive effect on their writing test score, increased their language comprehension, and developed analytical thought and higher cognitive skills when writing about what they had read. In addition, student experiences with teachers and peers have become more complex and intense by blogging practises. The academic environment was no longer governed by the teacher, but over time, students became interested as co-constructors of

knowledge. It is consistent with other recent literacy work, which shows that in immersive learning contexts, all learners assume the role of both teacher and learner, and that the power should not be treated as one-way. The researcher believed that collaborative classrooms is an emphasis on group learning.

Collaborative classrooms create understanding, exchanging ideas, and finding solutions together. Here the teacher's role is responsible for setting goals, designing and assessing the students on what they have learned.

2.7 Interaction

Web 2.0 is the second generation of the World Wide Web. According to Yusof and Basar (2017), the emergence of Web 2.0 technology, including wikis, journals, online forums, chat rooms, and several others, will support synchronous or asynchronous connexions and enable students to work together in a virtual environment. There are many different forms of interaction in a group; social interaction and task interaction. Social interaction is where interaction took place among friends, society or community and task interaction is where members cooperate to complete a task. The basis for all learning is social interaction.

Vygotsky (1978) argued that social experience precedes the growth of knowledge and skills. Consciousness, conceptions of self and personality, physical ability and intellectual capacity, all of which find their roots in the social contact between the infant and the parent and between the infant, peers and teachers. He also assumed that learning was encouraged by contact with peers, such as verbal conversations and peer observation. The social interactions let students understand what they observe. The high interaction Team requires a high degree of cohesion activity to achieve success but, on the other hand, modest cohesion group interaction has a low capacity for

success. On the other hand, the community may experience problems in the form of lack of consensus or cooperation at topics, assignments and the method of team interaction.

Team leaders may not be aware of this challenge until it has impacted their job. Learner established learning assumptions: Education was an engaging proactive mechanism that relied on a rich context. The learners are complex and fundamentally relational and have both an affective and a contextual aspect. As a result, the model of teaching and learning is changing from a traditional teacher-centered to a student-centered of collaborative learning. According to Law, Chung, Leung and Wong (2017) Collaborative learning is socially and emotionally active as students work in groups of two or more, engage in the project and collaborate on goals and assignments. They found that by doing things on their own or by over-serving the actions of others, new habits can be learned. Individuals benefit from each other through learning and feedback, and feedback is one of the variables that can affect their behaviour. Behaviour often partially produces an atmosphere, and the resulting climate, in turn, affects actions. Through this two-way process, the environment is just as important as the actions it influences. According to Saeed, Khaksari, Eng and Ghani (2016) it is necessary for language learners to develop their speech skills, to practise the language they are studying, and in particular to participate in exchanges with learners in the classroom environment..

Effective learning happens when the learners interact with and experience the environments which motivate them to explore, reflect opinions, and develop their own interpretations to solve the problems collaboratively (Vygotsky, 1978). Computer-mediated research, like wiki-mediated communication, has paid attention to student

interaction in terms of text creation and the advantages of wikis for collaborative writing. (Li & Zhu, 2013).

According to Leow and Neo (2016) stated that with the advancement in digital learning technologies, it is more capable to support group interaction and enhance the learner experience in collaborative learning environments. In addition Espasa, Guasch, and Alvarez (2013) reported that effective factor can also be considered as a predictor of learning outcomes it reflects the students' feeling, attitudes and the social interactions in their learning experience in the learning activities, with the peer learners. Further research are required on the pedagogical aspects of collective writing where the co-construction of information takes place by interaction (Storch, 2013). For effective communication, some of the critical interpersonal skills required by students are that they should be able to engage in conversation with each other, to comment directly about what another speaker has just said, to disagree with or contradict a point made by another speaker, not to be asked to talk or to talk when there is a brief pause signaling the end of someone else's turn, to disturb one another in order to give an opinion or to speak. features (Caunihan, 1998 as cited in Lourdunathan & Menon 2017). Many ESL students who fail with academic writing conventions frequently want to find simple ways out by 'cutting and pasting' because they do not grasp the protocols for referencing conventions and do not see their significance aside from the lack of academic capabilities (Al-Khasawneh & Huwari 2013). They added that, in order for students to excel in a foreign language in general and to write skills in particular, they need to be surrounded by a language learning environment.

2.8 Attitude

Today's educations have embarked and intertwine with the challenges in adapting to an advance increasing technological learning environment. According to Fishbein & Ajzen (1975) proposed that the immediate determinant of behaviour is the intention, or what they termed behavioural intention. They added that attitudes are held with respect to some aspect of the individual's world, such as another person, a physical object, a behaviour, or a policy. Ajzen and Fishbein (1977) reported that attitudes are held with respect to some aspect of individual's world, such as another person, a physical object, a behaviour, or a policy, therefore the way a person reacts towards his surrounding is called his attitude. Baron and Byrne (1984) added that attitudes are relatively lasting clusters of feelings, beliefs, and behaviour tendencies directed towards specific persons, ideas, object or group. Studies have shown that school teachers indicated that technology assists the learning process especially in reinforcing and expanding the content of the lesson. A positive outcome from the student demonstrates how the use of technology in the classroom has helped students remain involved and display interest when teachers illustrate lessons using digital delivery devices. Students are also involved in multimedia presentation devices, video samples, graphics and audio visual features. According to Gedamu and Kuche (2018) people's attitudes in all aspects of development begin from the early childhood period as the result of their parents' and friends influence which eventually bring either a positive or a negative value judgment. Today's technology plays a critical role in everyday human community development. The widespread technology adoption of technology in every classroom has completely changed how the methodology of teaching and learning.

According to Baturay, Gökçearslan and Ke (2017) theory, four primary factors may affect the dissemination of these technical advances in educational settings: creativity, contact networks, time and the social environment. On the other hand Harrell and Bynum (2018) argued that although classrooms may have access to technology programmes, there are a range of variables that hinder the successful application of technology in classrooms, such as insufficient facilities, outdated resources, lack of appropriate technical equipment, efficient professional development (external factors), low self-efficacy of teachers and expectations of teachers (internal factors).In preparing students to be college and career ready, technology integration is imperative. Furrer, Skinner, & Pitzer (2014) claimed that interaction re courteous and respectful and concentrate on studying the materials and developing analytical skills. Students express what they really believe and openly listen to others' viewpoints; students give helpful guidance and are open to feedback; the classroom is welcoming but based on learning and full of stimulating fun, hard work and shared pleasure and appreciation. In addition, Hasler-Waters and Napier (2002), in their results, thought that their personal learning expanded and that their personal communication skills strengthened after gaining training in team building from the programme and engaging in the team project on-line. Effective collaboration and online cooperation guarantees the quality of the development of a professional writing product.

This study focuses on ESL students' attitudes in a new learning environment and how they interact and communicate with each other using a web-based website. Woodrow (1991) pointed out that "student understanding" of computer attitudes is a crucial criteria in the assessment of computer courses and in the development of computer-based curricula.

Moreover, Shashaani (1994) pointed out "computer experience is positively related to computers attitudes". Web-based learning strategies have been described as a promising alternative to traditional education, particularly for rural students and for continuous learning. This will be the latest classroom for students, where teachers will test the student's disposition and communications skills by using online e-tools to develop their writing abilities, rather than just use any social network for conversation. Solid group work between students help to establish good scaffolding in writing collaboration.

The researcher strongly believed that this study is able to showcase that ESL students are more comfortable in using the website as part of their learning environment. The working disposition towards machines or IT is a significant element in the enjoyment of e-learning. A more optimistic outlook towards IT, for example, where students are not fearful of the difficulty of using machines, would result in more satisfied and effective learners in an e-learning environment. This indicates that interacting using web-based will increase students' interest in learning. As most of today's students are well versed with the latest technology and the internet. According to Ibnian (2012), the development of student attitudes towards learning is perceived to be one of the most significant things to be taken into consideration when addressing factors influencing the teaching-learning process. According to Tomlinson (2014) mentioned that emotions and feelings originated in the brain based on past experiences and reactions to current experiences can also define one's attitude. Their attitude will determine if this technique of learning can be accepted and carry out in the near future. The expanded proliferation of modern accessible emerging technology has made it possible to use these devices everywhere and at any moment, and people routinely connect and engage with technology in every aspect of their lives, including

classrooms (Wood, Zivcakova, Gentile, Archer, De Pasquale & Nosko, 2012). According to Belland (2017), computer-based scaffolding is designed to provide backup assistance to scaffolding structures so that students provide all the help they need to accomplish their assignments. Moreover, Bashir and Shafique, (2016) in their study, mentioned more students are relying on the Internet for their academic needs than in the past. Wikispaces classroom are highly democratic and decentralize individual power because all who participate have an equal opportunity to contribute, edit, and reconstruct entries. Teachers and students are able to handle their day-to-day classroom task and to access information, material and software from the Internet under one roof. Users do not need to have advanced technical expertise to use a wiki, making it convenient for those with basic programming knowledge to use it.Therefore, in this study, it is crucial to identify students' positive and a negative attitude towards the technology environment that they will encounter in the tasks given.

(a) ***Attitude***

Attitude is a collection of feelings, values, and actions towards a single entity.. According to Macaro, Handley and Walter (2012), there is limited and inconclusive proof that technology has a clear and beneficial effect on linguistic 'outcomes,' but it could have an indirect and positive influence on learning attitudes and behaviours and could promote cooperationRhema and Miliszewska (2014) optimistic learning environment and success expectations impact student satisfaction, and performance expectations make the largest contribution (total effect) to learning satisfaction. Today's classroom environment ultimately affects student expectations and student responses to the context. Learning would not be easy because, on the one hand, students had optimistic attitudes towards it, and, on the other hand, attitudes might derive from life experiences (Eshghinejad, 2016). As Tomlinson (2014) mentioned when a student has a positive effect regarding learning and himself or herself as a learner, it opens the door to academic growth. According to Mega, Ronconi, and Beni (2014) students have been found to feel a wide spectrum of feelings in a number of classroom environments, such as taking tests and attending lectures. This means that the attitude of the pupil towards various learning environments varies accordingly. If the student felt motivated they will show positive attitude towards the event. "Attitudes and all facets of the growth of cognition and affect in human beings, which evolve early in infancy and are the product of attitudes of parents and peers," he said, communication with individuals who are different in many respects, and connect with influential influences in human experience" (Brown,1994:168 as cited in Gedamu & Kuche, 2018). Attitudes structure can be described in terms of three components: affective component (involves a person's feelings / emotions about an attitude object), behavioural (or conative) component (the way the attitude we have influenced how

we act or behave) and cognitive component (involves a person's belief / knowledge about an attitude object) the model is known as ABC model or three-component model of attitudes (Fishbein & Ajzen 1975; Vyrost 1898; Hogg & Vaughan, 2005 as cited in Verešová & Malá, 2016). According to Bhuasiri, Xaymoungkhoun, Zo, Rho and Ciganek (2012) the most critical influences in developed countries were the understanding of technology and enhancing e-learning habits, enhancing information technology literacy and skills, improving learning quality, needing technical preparation, enabling people to use e-learning programs. Kalayci and Humiston (2015) highlighted that students ' moral values and attitudes towards web-based schooling are seen as a key factor in the positive incorporation and implementation of such a programme in the institution's learning activities. According to Gajalakshmi (2013) the student's attitude is an important part of learning and will also become a central aspect of second-language learning.

Attitudes towards learning are believed to affect activities such as choosing and reading books, speaking in a foreign language, etc., particularly in education, where students have a positive attitude towards any subject, several things can be done in that particular field. It indicates that behaviour is an indirect result of information or relevant behavioural beliefs towards the behaviour so that each of the influential factors is derived from behavioural beliefs; in this study, attitude affects behaviour towards the interactions between group members.

External factors may influence their attitude. In this study, social online interactions may have affected the students' attitude and perceptions towards their collaborations.

"Attitude is measured by the individual's confidence in the consequences or attributes of behavioural behaviour (behavioural beliefs), weighted by the measurement of certain consequences or attributes. As a consequence, a person who has firm expectations that positively regarded consequences will benefit from the success of the behaviour should have a positive attitude towards the behaviour. Conversely, a person who has firm expectations that negatively valued consequences will result from actions would have a negative attitude (Gajalakshmi, 2013). Attitudes have a crucial influence on social information processing and social behaviour. According to Ajzen's (1991) Planned Behaviour Theory, attitude affects behaviour through a process of planned decision-making.

(b) ***Perception***

Perception is a process of recognition, interpretation, retrieve and response towards any information. It is a process where sensory information is organized and interact with the environment. According to Al-Qahtani (2015), in the area of health education, the literature confirms the evidence of a correlation between academic performance of students and their understanding of the learning environment. In addition, Dent, Harden, and Hunt, (2017) stated that an assessment of the learning environment is considered a crucial aspect in delivering high-quality education. Feedback is also one factor that affects students' perceptions other than values and attitudes. According to Rotsaert, Panadero and Schellens (2018) pointed out that it is necessary to recognise students ' understanding of developing their peer feedback skills while analysing the growth of their peer feedback results; the correlation of students ' perceived peer feedback skills and the actual quality of their peer feedback is significant. According to Könings, Brand-Gruwel and van Merriënboer (2011) students are big collaborators in education and their happiness with the learning atmosphere has an impact on the

level of learning. Adding to that, how students interpret their learning environment is important as their talents dictate their dedication (Könings, Seidel & Merriënboer, 2014). Student perceptions result may help in measuring or even improving the effectiveness in learning and teaching methods it also provides educators with meaningful feedback towards student learning.

Previous work has found that this results in a variety of advantages, such as greater control over the feedback provided from students and, as a result, greater control over their own performance (Nicol, Thomson & Breslin, 2014). Learning that incorporates peer feedback is related to perception in learning strategy. According to Mostert and Snowball (2013), the association between the quality of peer input and resulting learning success is likely to be influenced by student expectations of the peer feedback received. Student perception is an important determinant of their behaviour by understanding their perception it will be useful for the teachers and the system to improvise to the student learning environment and needs. Students' perceptions of learning and teaching techniques will have a significant influence on their learning outcome.

2.9 Theoretical Framework

2.9.1 Introduction

Web 2.0 offers endless impending tools for learning purposes, it is important to create a new learning environment that will meet the ESL students need using a constant theoretical framework. The theoretical framework with the standard information literacy and research-based learning theories that were used for designing instruction whereby able to develop teaching materials and creates various learning

activities especially for ESL students. The theoretical framework serves as a foundation for this study is the scaffolding theory.

Lev Vygotsky views towards interactions with peers is an effective way of developing skills and strategies. In his work, he suggested that teachers should use cooperative learning exercises where less competent children are able to develop with the help from more skillful peers this defines his theory on Zone of Proximal Development (ZPD). This framework offers learning theories that assist to understand the Meaning of collaborative learning in terms of learner engagement, group discussion, collaboration, participation in communities of practice, language and the importance of Meaning. Vygotsky believed that when a student is in the ZPD for a particular task, providing the appropriate assistance will give the student enough of a "boost" to achieve the task. Vygotsky also states that cognitive development stems from social interactions from guided learning within the zone of proximal development as children and their partner's co-construct knowledge.

The collaborative tools that serve as a way of communication for collaborative learning activities where group members use their techniques to write collaboratively, share knowledge, sharing ideas, provide suggestions, and discuss with each other on any given topics. Students who have attitudes and expectations towards the subject matter and toward learning are shaped by the classroom culture created by teachers and the environment.

Vygotsky (1978) claimed that ‘human learning presupposes a specific social nature and a process by which children grow into the intellectual life of those around them.’ He also mentioned that ‘every function in the child’s cultural development appears twice, on two levels. The first level is on the social and later on the psychological; on

intrapsychological level – between people and inside the child. Vygotsky stressed that the social function and the corresponding mental function are not the same; the process of internalization is a process of transformation, involving appropriation and reconstruction. Vygotsky pedagogy: as all knowledge and ability arise in social activity, all learning is constructed, and nothing is ever gained by taking the interactional dimension out of the equation. There is a role for individual work in consonant with sociocultural theory (SCT), but only in the context of collaborative work.

2.9.2 Zone of Proximal Development

The ZPD is best known as a construct in SCT, the definition of ZPD: "It is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under guidance or in collaboration with more capable peers." Vygotsky complained that traditional mental tests only tested the already achieved level of competence ('the past') but that if children received appropriate assistance, their performance would be more predictive of what they might be able to achieve ('the future'). Therefore, he made mental testing to be more collaborative, guided experience instead solitary, the individual performance it had hitherto been. He conducted rigorous experimental studies that showed clear evidence that ZPD testing was much more predictor in succeeding than the traditional individual test.

Although the theoretical theory for this study is scaffolding and peer scaffolding it is essential to mention Zone of Proximal Development. Vygotsky had developed a theory of cognitive development that concentrated on culture especially in the development of higher mental functions.

Zone of Proximal Development is defined as the range of tasks/activities that a child can perform with the help and guidance of others as they have yet to perform them independently. Vygotsky mentioned that ZPD is an important instruction should occur as for scaffolding serves as a support mechanism that helps learner successfully perform a task with the ZPD range. This process can be completed by a more competent learner sporting the learning of a less competent learner, for example, a teacher assisting the students or a higher lever peer assisting a lower level peer.

Vygotsky considered social interaction important for language development, while he saw social interplay and communication between persons as important for their general mental growth. The ability to analyse a problem and distinguish all its elements and then prepare a solution is one of the most valuable skills one can acquire.

In a classroom a more knowledgeable person is not always the teacher or educator; students are able to take the role as well especially when they are placed in collaborative groups with others who have demonstrated mastery of tasks and concepts. In ZPD, the main goal of education from a Vygotskian perspective is to keep learners in their ZPDs as often as possible by giving them interesting and culturally Meaningful learning and problem-solving tasks that are slightly more difficult than what they do alone, such that they will need to work together either with another, more competent peer or with a teacher or adult to finish the task. The students with more mastery of the knowledge will assist other students in need of guidance.

Vygotsky, (1986) mentioned that peer response groups afford an opportunity for such interaction. Members of a group, through conversation, help each other generate ideas; support and encourage each other during the composting process, and provide an increased sense of audience for each other.

Collaborating among peers creates an atmosphere of understanding between both parties; more and less competent. They will meet at a point where both will collaborate to achieve the target of the task or completing the task given. The conversation of collaborating in this practice is called scaffolding. Writing thus becomes the focus of conversation for a community of peers in the classroom.

2.9.3 Scaffolding Theory

For this study, scaffolding is defined as the assistance provided by a teacher/ adult or a more capable peer to the child or less capable peer so that the two together are able to accomplish the task they have been set.

The scaffolding is temporary, but essential for the successful construction of the building. Bruner (1978) claimed that scaffolding in the metaphorical sense in which we are using it here, as "the steps taken to reduce the degrees of freedom in carrying out some tasks so that the child can concentrate on the difficult skill she is in the process of acquiring. The web-based environment can also be considered as scaffolding to help students to experience new learning methods to enhance their writing skills.

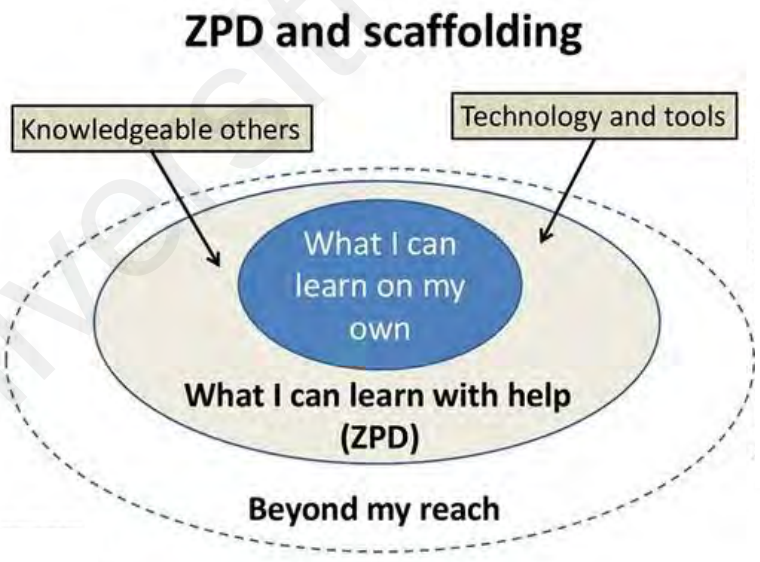


Figure 2.4: Zone Proximal of Development and Scaffolding

Scaffolding has come to refer to both aspects of the construction site: the supportive structure (which is relatively stable, though easy to assemble and reassemble) and the collaborative construction work that is carried out.

The Vygotskian concept that defines development, where the space between the child's level of independence of performance and the child's level of assisted performance. Zone of Proximal Development (ZPD) has contributed a lot to the concept of scaffolding. The zone of proximal development can also be described as the difference between what a learner can do independently and what can be accomplished with the help of a "more knowledgeable other". This concept is critical for understanding how to scaffold learning.

Scaffolding is an act of supportive interactions between an adult and a child that enable the child to carry out tasks beyond his or her independent efforts. Scaffolding was first introduced by Wood, Bruner, and Ross (1976), it was used as a metaphor to refer to what happened between a tutor and a child: a "process that enables a child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts". This statement eventually is evolved not only towards interactions between teacher and students but signifies the peer interactions. As they further note, scaffolds require the adult's controlling those elements of the task that initially beyond the learner's capability, thus permitting him to concentrate upon and complete only those elements that are within his range of competence (p.90). In terms of the overall approach, scaffolding encompassed three key characteristics: contingency, intersubjectivity, and transfer of responsibility (Wood et al, 1976).

According to Devos (2016) scaffolding emerges when, in interaction, the novice or novices encounter problems and they allow the expert or experts to aid them to solve that problem. In addition, during interaction in such situations, experts can: provide novices with oral support that will allow the talk-in-interaction to continue or solve the novice or novices' language-related questions. According to Wood et al, (1976) stated

that contingency meant that teachers dynamically assess student' current abilities through questioning or observation and provided just the right amount of support. Scaffolders then continued to engage in dynamic assessment throughout the scaffolding process, adding and fading support as needed, eventually fading the support completely when students could complete the target task unassisted. Contingency also meant that the teachers could provide a tailored strategy using either a generic or a context-specific approach based on what dynamic assessment indicated was needed. Inter-subjectivity meant that students needed to be able to recognize a successful solution to the problem that they were addressing.

Scaffolding is a temporary framework that is putting up for support and access to Meaning and taken away as needed when the child secures control of success with the task. In the literature review of peer scaffolding, there are two significant perspectives that could be found which represented by two theorists Vygotsky and Piaget. Accoding to Azevedo and Hadwin (2005) scaffolding may support a range of instructional targets including (a) learning domain knowledge (e.g., concepts, procedures, etc.), (b) learning about one's own learning (e.g., metacognition, self-regulated learning), (c) learning about using the computer-based learning environment (e.g., procedures, embedded tools, functionality, etc.), and (d) learning how to adapt to a particular instructional context (e.g., engaging in adaptive help-seeking behaviour, modifying contextual features to facilitate learning, etc.) (p.370).

The theories of Vygotsky (1978) on the zone of proximal development (ZPD), defined as "distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable

peers". The base conjecture agrees with this definition, as in need of inequality incompetence between individuals for scaffolding to occur and gives favourable for a child to work with an adult or a more capable peer than with a peer of equal competence.

In Piaget (1928) theory he did not consider inequality incompetence to be necessary. He did argue that because of the unequal power relations, interactions with an adult will simply cause the children to abandon their ideas. Scaffolding is increasingly being used in learning techniques in the education system. The context of scaffolding is not only to assist but support the students accomplishing the task but also to gain knowledge through the experience. Scaffolding is a teaching strategy that is laden with the notion that learners confront an educational setting with a great deal of prior knowledge. He mentioned that the knowledge may not be as accurate, but the crucial point is the process of building on what the student already knows thus making scaffolding an effective instructional technique. Scaffolding with technology has also been evolved especially in online learning. The online classroom is using software e-tools to scaffold students in all their tasks. It is to provide the support that the students will need when facing complex tasks at hand.

E-tools are also a form of scaffolding which supports students learning the process. In today's advanced software, the e-tools that they provide can help students to structure the task, organize, edit, collaborating and engaging in an online community. According to Kim, Bell and Walker (2016) claimed that scaffolding can be faded and added according to students' current abilities and needs. They added when students can accomplish the ill-structured tasks without any scaffolding, the continuous provision of scaffolding can be obstructive to students' self-directed learning. E-tools

provided by the website can benefit students in many ways especially in completing their tasks. The students are usually very familiar with the e-tools because they are used with gadgets such as smartphones, laptops, computers, and tablets that have been a part of their daily lives. Therefore, they are very familiar with the e-tools offered by the websites.

In Vygotskyan theory, scaffolding provides theoretical factors that are necessary for students able to make a connection through social interaction and cognitive development. E-tools are a form of scaffolding as it assists students in improving the final product of the task given to them. According to Arifeen, and Jamila, (2018) stated that they found many researchers have studied and investigated web 2.0 as a supportive language learning or teaching tool in ESL/EFL classroom where they have found most learners and educators considering its usefulness without hesitation.

This study was intended to investigate how scaffolding can improve L2 learners' writing strategy application and hence their writing quality with the help of their peers' and the environment in the Wikispaces Classroom website. Harris and Hodges (1996) claimed that scaffolding in learning as the gradual withdrawal of adult (e.g., teacher) support via instruction, modelling, questioning, feedback, etc., for a child's performance across successive engagements, thus transferring more autonomy to the child. Palincsar and Brown (1985) mentioned that the meaning of scaffolding is no longer confined to interactions between teacher and student or parent and child, but has expanded to include peer interactions and artefacts such as books, diaries, videos, and computers that support learning. With the advancement of educational technology, scaffolding could now be embedded in computer software to help students in accomplishing their tasks.

Scaffolding can appear in multiple forms depending on the various types of support either from another person or mechanisms to ensure students engage in an inquiry-based learning activity. Studies have shown complementary mechanisms that provide scaffolding. Software tools could help structure the task to guide students through while accomplishing their tasks and giving them the tools to help structure and complete the content in a more organize and structure form. According to Van Driel, Slot and Bakker (2018) stated that a teacher can implement scaffolding in the classroom by using scaffolding strategies: after implicit diagnosis (i.e judgement of what pupils need) the teacher chooses a strategy that seems to be appropriate at that moment, in this way responding contingently, with the overall goal to make pupils more independent. According to Bakker, Smit and Wegerit (2015) because of the adaptive nature of the scaffolding process, it is suggested to come close to "good teaching". The teacher can enrich pupils' scientific language use by implementing a scaffolding strategy that seems suitable for the pupil(s) in a specific context.

By providing support adjusted to the needs of the pupil(s), the teacher can contingently support them in their scientific language development (Van Driel, Slot & Bakker, 2018)

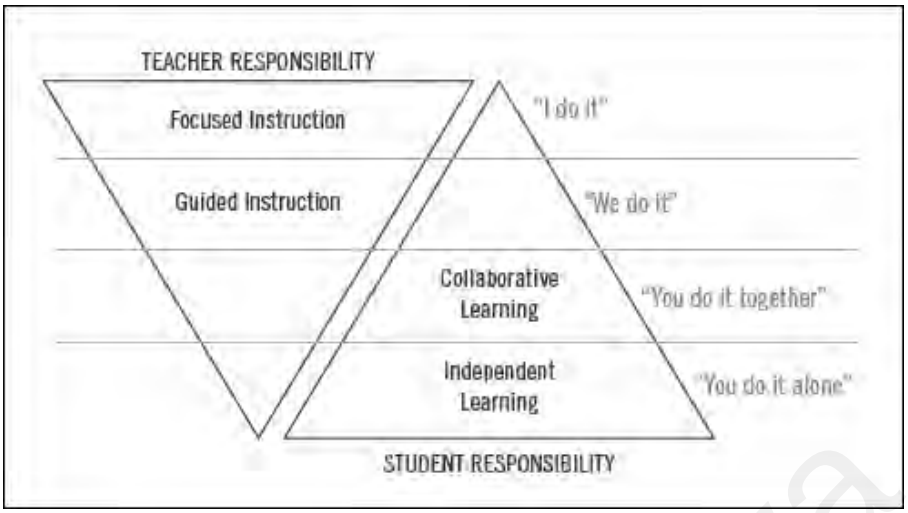


Figure 2.5. Fisher, D. (2008). Effective use of the gradual release of responsibility model

Van Lier, (1996) in his study states that in that research that scaffolding can be affected by both teacher and peer. His six principles of scaffolding can occur among students without the physical presence of a tutor. His principles are contextual support, continuity, inter-subjectivity, flow, contingency, and handover, it shows that before the final submission to the tutor. It may be assumed, although not proved that the autonomy of individual students might be enhanced as a result of this interdependence. Scaffolding can be used at any point of interaction between teachers and students at the point of providing inputs and explanations, through to modelling, interacting and assessing.

Scaffolding might include:

1. explaining a new concept through a concept map
2. making deliberate comparisons with the first language and culture • focusing on particular words to develop a meta-language
3. providing and explicating fruitful examples; asking students to notice particular aspects/features
4. highlighting patterns and choices
5. elaborating on an initial explanation
6. using questions to probe students' conceptions and prompt them to describe their interpretations and challenge their opinions
7. using various ways of representing ideas and concepts (visuals, diagrams, organisers, highlighting, various media and technologies)
8. the feedback that relates to improvement.

Scaffolding is a process that ensures the learner with sufficient guidance until the learner understands and able to removes all the supports in order to carry out the task on their own". According to Yücel and Usluel (2016) mentioned that Scaffolds are considered important because they help students easily convey their opinions to themselves and group members. Teachers monitor student responses and find ways to ensure that students make personal meaning of their experiences and develop a fuller understanding. This dialogue and questioning not only involves teacher-to-students and students-to-teacher interaction but also peer discussion. According to Goh (2017) states that scaffolding activities can assist learners in planning and organizing speech, and learn the language and strategies for strengthening oral communication abilities.

Careful design of a learning environment with sufficient scaffolding that explores collaboration and provides opportunities to give and receive peer feedback will enable students to develop and embrace these career skills in an academic environment (Lowell & Ashby, 2018). Scaffolding is also an important aspect of diagnostic assessment. In providing assistance through scaffolding, teachers are able to gauge what it is that students can do independently and what they can do with particular kinds of assistance. These varied interpretations have expanded the significance of scaffolding to the extent that who provides scaffolding is no longer a question and the focus has shifted from "expert" to "expertise". The use of scaffolding is no longer restricted to expert/novice interactions and many researchers have considered *peer collaboration as peer scaffolding*. In this study, the researcher also focus on the importance of peer scaffolding during online collaboration. Peer scaffolding is essential because it the core within the online community. Group members need to support each other in order to complete the task given. According to Nguyen (2013) peer scaffolding work and L2 learning in particular concentrated on two main themes: effectiveness and peer scaffolding mechanisms moreover in the field of effectiveness, peer scaffolding is often presented in L2 research as an effective way to foster the development of L2 learners.

2.9.3.1 Conceptual Framework

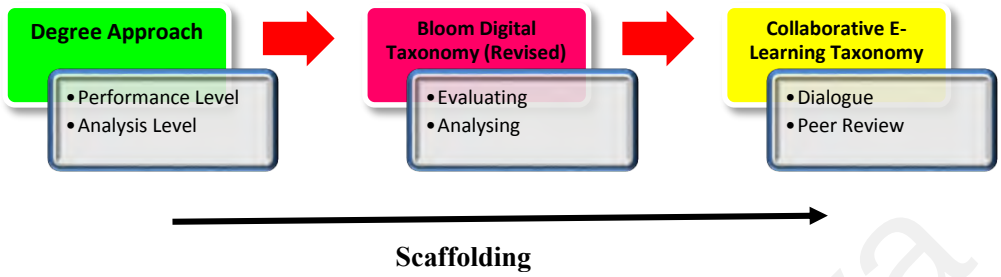


Figure 2.6: Illustration of conceptual framework for this study

The methodological structure of this research is the synthesis of Degree Approach, Bloom Digital Taxonomy and Taxonomy Collaborative E-Learning. This analytical structure is meant to help explain the nature of this analysis. Collaborative learning through scaffolding is a valuable educational activity that facilitates learning through constructive engagement, allows children to collaborate together to prepare for their transition to the larger world and maximizes the use of available technological tools. According to Ibnian (2012) that group work should improve organizational skills such as speech and listening, as well as team work skills such as leadership, where they will be able to inspire each other. Belland (2014) explained that educational scaffolding can be described as help offered by a teacher / parent, mentor, or computer, or a paper-based resource that helps students to engage meaningfully and learn skills in a role that they would not be able to achieve without assistance. A group will initiate their discussion on the topic given by the teacher or the educator. In the context of collaborative e-learning, the researcher used two aspects of dialog and peer review. Via communication, each member of the community is able to send messages and, in

exchange, provide input on the assigned task. According to Talib and Cheung (2017) increased interaction and collaboration in the process, students develop their language, grasp text coherence and learn new viewpoints and perspectives. Members of the group will exchange their thoughts, seek knowledge, debate strategies and pursue solutions together as a collective. Students as critics are able to encourage each other and find the correct interpretation of language, the concepts or arguments are organized in a manner that is well structured and easy to comprehend. This will help each group member to get used to having others to review their work in order to achieve standard good quality in writing product. According to Storch (2002, 2005, 2007) reported that scaffolding mechanisms during collaborative writing L2 learners are able to pool their linguistic resources and ideas, provide feedback, make suggestions and counter-suggestions, offer explanations, and repeat the suggestions made. Meyer and Turner (2007) claimed that Maintaining students ' comprehension of complex ideas, displaying their abilities and flexibility, involving and persevering students, and students ' emotional or personal interactions are important in any way, particularly in learning. Therefore emotional scaffolding can support individuals and improve performance by providing emotional support.

According to Rahimi (2013) mentioned that peer editing and feedback not only helps learners to revise their writing, but it also gives them a sense of audience, which makes the process writing experience more purposeful, meaningful and communicative. He further added peer feedback is more attuned with the students' level of proficiency than teacher feedback.

That is why it is more manageable for the students to apply, as it is also less threatening and more specific and effective for revision at times. The development will

occur through peer review when the learners interact positively in oral and written communication that includes asking a question, providing feedback and instructing on error correction (Hojeij & Hurley, 2017). The conceptual framework for this study is the combination three of degree approach, bloom digital taxonomy and collaborative e-learning. According to Zhu (2012), group learning is a social activity involving a collective of learners and teachers, where participants study and exchange information or expertise. The scaffolding framework is significant in this study as the scaffolding components are present at all levels of interaction, collaboration, dialogue and peer review. Adding to this Farrah (2015) pointed out that the students learn, reflect, teach, share and question in a friendly atmosphere. Students assume responsibility for teaching and learning through scaffolding, allowing them to step above their existing level of competence and understanding (Hamad & Abdelsattar Metwally, 2019). Assisting each other in a group will foster a positive attitude. Working in Wikispaces Classroom increases the sense of community and respect among the group members' - the elements of feelings or emotion are important as these elements contribute towards motivating the students to develop their interest in (as for this study context – writing in the English language). The environment in Wikispaces classroom offers benefits to students to learn new technique in writing online. Dialogue gives students the ability to use the language to successfully deliver a message across and received feedback that assist in completing the task. Students improve their writing skills through comments, encouragement, compromising from other group members and learning new steps or methods in accomplishing their work or task.

Such an environment offers peer feedback where it teaches students the skills in giving, receiving comments, views, compromising, respect and taking responsibility for their learning. According to Femdal and Solbjør (2018), mixed focus group

engagement will make a valuable contribution to information creation. It adds to the understanding of the focus group experience by showing how the group interaction is affected by a particular role in the field.

According to Lowell and Ashby (2018) in their studies, peer support practises have played a significant part in the progress and cumulative performance of student initiatives. While some students were still unaware of their awareness and communication skills, peer review tools and opportunities helped most students learn how to give and accept input. According to Lang (2018) stated that peer feedback is common in English-majored class interaction. It has the functions of providing vocabulary, correcting wrong expressions, providing opinions, explaining the task, inviting others to engage in the discussion. Peer interactions are always different in many aspects, and since peer interaction requires a significant amount of time in many L2 classes, it is high time to advance the research agenda by carefully observing the nature of peer interaction, identifying and exploring mediating factors that affect L2 learning during interaction, and looking for ways to enhance its pedagogical potential (Sato & Ballinger, 2016). Effective communication skills in collaboration are crucial in becoming a successful learner. Communication allows students to become educated, self-determined, inspired and develop logical thinking skills. Online learning presents students with additional perspectives on existing experience and strengthens their relational skills in an online community; this in turn shifts the role of students and how they communicate with each other.

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teachers, where participants study and exchange information or expertise. The scaffolding framework is significant in this study as the scaffolding components are present at all levels of interaction, collaboration, dialogue and peer review. Adding to this Farrah (2015) pointed out that the students learn, reflect, teach, share and question in a friendly atmosphere.

Students assume responsibility for teaching and learning through scaffolding, allowing them to step above their existing level of competence and understanding (Hamad & Abdelsattar Metwally, 2019). Assisting each other in a group will foster a positive attitude. Working in Wikispaces Classroom increases the sense of community and respect among the group members' - the elements of feelings or emotion are important as these elements contribute towards motivating the students to develop their interest in (as for this study context – writing in the English language). The environment in Wikispaces classroom offers benefits to students to learn new technique in writing online. Dialogue gives students the ability to use the language to successfully deliver a message across and received feedback that assist in completing the task. Students improve their writing skills through comments, encouragement, compromising from other group members and learning new steps or methods in accomplishing their work or task. Such an environment offers peer feedback where it teaches students the skills in giving, receiving comments, views, compromising, respect and taking responsibility for their learning.

According to Femdal and Solbjør (2018), mixed focus group engagement will make a valuable contribution toinformation creation. It adds to the understanding of the focus group experience by showing how the group interaction is affected by a particular role in the field.

CHAPTER 3: METHODOLOGY

3.1 Introduction

In order to answer the research questions descriptive quantitative and qualitative method were used for this study. This was a non-experimental study. Probability sampling was carried out for this study. The sampling technique wherein the samples were gathered in a process that gave all the individuals in the population equal opportunity to be selected. The quantitative data was obtained through the use of the questionnaire which was given to the respective students at the end of the semester and supported with qualitative data. Qualitative data were obtained from the website and the conversation were manually recorded. The collection of the qualitative data was challenging as the researcher had to print screen on every online interactions and had to manually categorise them to specific types of interaction for this study. The website unfortunately did not provide any tools for this purpose. The online conversation of 215 students took more than a month to select and categorised.

The questionnaire comprised of three parts, Part A, B, and C. Each part represented all the three research questions for this study, there were 50 questions in total. Demographic questions were asked at the beginning of the questionnaire. The demographic questions for this study were basic questions, which was age and course. The questionnaire focused on the type of technology that the students were using at that time and the type of internet access while they were interacting with while using Wikispaces Classroom website. The data from the demographic questions determined the factors that influenced the respondent's answers.

3.2 Sample

The sample of 215 for this study was from students of the local university. The total population at the time of this study were two thousand students and the sample was 215 university students. The participant was selected based on the characteristic of the population and the objective of this study. Therefore, this study used a purposive sample which is a non-probability sample.

3.3 Respondent

The majority of the university students were the foundation and first-year students. The Foundation Study Program (FSP) is a rigorous training curriculum that provides students with basic knowledge and skills that are important to their respective degree programmes. This is geared to engineering, electronics, scientific and management degree programmes. The goals of the programmes were to ensure that students were able to apply basic knowledge and skills, communicate efficiently and show positive principles in the pursuit of education. The length of the programmes is one year or three semesters. The courses offered FSP are; chemistry, physics, mathematics, economics, business management and quantitative analysis. Most of the students were ESL students (English second learner), all of the population were local students. The average ages of the participants were between 18 to 19 years old at the time when the questionnaires were distributed. These students were considered as generation Z, tech-savvy or well-knowledge in latest technology and application.

According to Seemiller and Grace (2017), these New Natives are made up of students currently entering college. In their research, GenZers identified themselves as trustworthy, conscientious, caring, open-minded, and responsible, a very affable self-description. The attributes, aspirations and behavioural behaviours of this teens' net

generation and IT-savvy students are core topics of conversation among educators who are seeking to create innovative teaching and behavioural strategies that can draw the interest of students (Moghavvemi, Paramanathan, Rahin, & Sharabati, 2017). As Schwieger and Ladwig (2018) pointed out, much like their millennial counterparts, Gen Z has been raised with technology that is readily accessible; however, the extent at which technology has been integrated into their daily lives has been different from that of any previous generation. Apparently, they are interested in lifestyle-change problems and skill expectations, and want to learn what competencies are expected in their aspired careers, and to enjoy technical checklists on what to learn and what to do.

These positive attributes could contribute to a willingness to learn. They are more interested in technology that provides various facilities to make learning and working a pleasurable and fun experience (Moghavvemi, Paramanathan, Rahin, & Sharabati, 2017). Gen Z-ers students are likely to be hands-on and they needed to be involved in every step of the learning process. This generation is more likely to embrace the social learning environment through technology. According to Schwieger and Ladwig (2018), Gen Z-ers have never experienced environment in which they do not easily interact and have knowledge and contact networks directly at their disposal.

As a result, those of this generation tend to socialise online rather than face-to - face, a trend that is both positive and detrimental for society.As the digital generation, Generation Z most likely expects digital learning to be integrated into their daily learning experience.

3.4 Tutorial Class

The term a traditional class is referred to as learning space where teachers offer face-to - face guidance to students and face-to - face contact with and from teachers and students. The study was conducted at a local university. The university terms for each semester was three months. Each class was given four hours of tutorial. The tutorials were conducted twice in a week. The first slot of the tutorial was used for teaching and the second slot of the tutorial was used for presentations and discussions. All of the tutorial classes that were conducted for this study was held during the day.

3.5 Online Class

The Wikispaces cassroom website does not have restriction on contact hour, everyone is free to log in and log out. For this study, there was no restriction or limitation on the contact hours for the students to use the website, students their full participation during online discussions. Each group members were able to leave comments in the comment columns (in the website) after they had done their writing or editing other group members' work. The only limitation was the contact hours with the tutor, for this study the contact hour was from 5 pm to 7 pm on a daily basis the reason was the tutor have other classes to attend to. The tutor will be able to monitor the student's progress as every post or edit that was carried will be notified to the tutor. The tutor can use the tool to track how much a student has read, written, or saved a file. The software will provide the teacher with an immediate analysis of each student's contribution. For this study, the tutor will only be observing the students comments, editing, and progress of task given.

3.6 Group

Group work is operationalized as a systematically defined goal-oriented mission, typically requiring participants meeting outside the classroom to collaborate together in the development of a particular piece of evaluation or a variety of similar pieces of evaluation (Scotland, 2016). In this study, the students were divided into smaller groups, each group consists of up to five members. Each group was given the freedom to choose their group members and nominate one of the group member as their group leader. Each leader was given the authority to print out the final product and submit them to the tutor. The explanation was that online students had more regular and positive conversations with their colleagues about a community project than face-to-face students. (Falls et al, 2014). Group learning is an essential way of inspiring pupils, promoting constructive learning and allowing them to improve critical thinking abilities, developing communication / interaction skills and even helping them to develop decision-making skills.

3.7 The Instruments

3.7.1 Wikispaces Classroom Website

Wikispaces Classroom website is a collaboratively authored, searchable documents which are linked to internally and externally. It enables anyone and everyone to create new content online using easy and understandable tools. The Wikispaces classroom offered a learning environment in which pre-service teachers were able to create, update, add and exchange ideas relevant to their teaching activities and tools based on curriculum standards (Reid-Griffin & Salten, 2016). They further added, it allows users access to materials as long as the wiki is kept active, which is a benefit for educators.

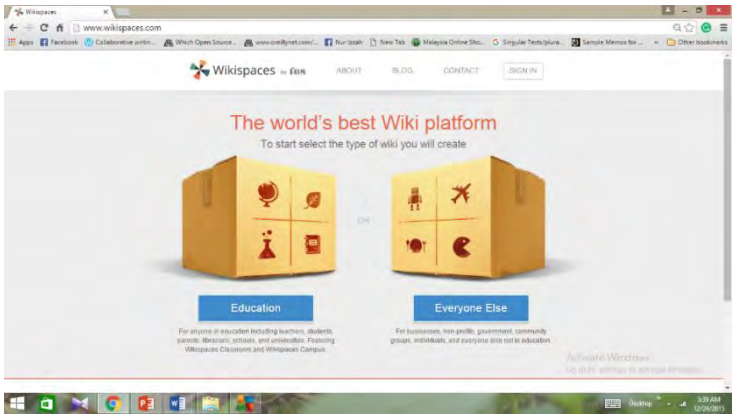

Figure 3.1: Wikispaces Classroom Official Website

Gagnon (2014) stated that Wikispaces.com is a free or low-cost web program that can be used by a multitude of individuals and organizations to engage their audiences and fulfil their missions. The instrument used in this study was the Wikispaces Classroom: www.wikispace.com. The website offers a collaboration of teamwork between teachers and students, students and students. The participants were able to work in a modern, private social environment that inspired them to be more creative and innovative with new ideas. The teachers or educators were able to give feedback, assistance, at the same the time it is easy for them to monitor and give encouragement as much as the students needed. Wikispaces Classroom gives the teachers and educators immediate, relevant and direct insight to the student contribution and engagement. This website built around a familiar communications newsfeed that focuses on the classwork especially group work.

For this study, students had the flexibility in engaging with their group members at their own pace which in the end resulted in more participation and enthusiasm in the classroom. Students were encouraged to communicate and participate in every group work and discussions. Scaffolding activities to create cooperative community writing

and to incorporate new concepts on text ownership will make wikis an important place to practice scholarly writing (Stetson-Tiligadas, 2016).

Wikispaces classroom website facilitate a learning environment facilitating interactions among group members. Interactions among group members/peers can be crucial for aiding learning to compare ideas at the same time enhancing their knowledge, understanding, resolution or action. Online conversation will minimize the risk of other students dominating the discussions. It creates an equal opportunity for everyone to contribute and be more involved. Online discussions also increase the participation of introverted students who have difficulties and reluctant to voice out during face-to-face discussions in class. According to Shehadeh (2011), collaborative writing can be used as an instructional resource to promote student participation and create a healthy social environment in the classroom. Studies have shown that students value the advantages of using online social media platforms for academic purposes as a way of complementing and enriching their learning practises because of its support for their learning interests and its potential to enrich their learning experiences (Veletsianos & Navarrete, 2012). Scaffolding activities to build up cooperative community writing and proposing new concepts on text ownership will make wikis a successful place to learn scholarly writing (Stetson-Tiligadas, 2016).

3.7.2 DEGREE Approach

Degree Approach was implemented in this study, the researcher only apply two elements of the approach; performance level and analysis level.

- **Performance Level.** Groups were formed and students began to explore the website. The editing-tools on the website were very similar to Microsoft Words. During the discussion, students' online interactions were monitored and manually recorded. The discussions took place immediately after groups were formed.
- **Analysis Level.** Analysing the students' online interaction during their discussions online to see if there is any form of motivations, encouragement or opinions from group's members. Agreement and disagreement among students will help in developing their skills in facing engagements or conflicts. Conversational structure from Barros and Verdejo (2000) was applied for this study.

Scaffolding will guide students to reflect on their actions, or they provide examples or opinions for a productive outcome. Interaction among students offers significant scaffolding to ensure they deliver good writing product. Scaffolding were used to assist students with beyond level of understanding. The interaction within the online community encourage the use of scaffolding while facing conflicts, debate or discussions.

3.7.3 Bloom Digital Taxonomy

Two elements of bloom digital taxonomy were use in this study; evaluating and analysing. After grouping the students, they have their groups in the Wikispaces classroom. Their conversation will manually jot down, this is because Wikispaces during the study was conducted, did not have tool to record any interactions between group members.

- **Evaluating** appraise, argue, defend, select, support and evaluate
- **Analysing** compare, contrast, criticise, differentiate, distinguish, examine and question

Interaction among group members that show supportive is also known as scaffolding. Under evaluating, argument among group members give space for scaffolding that allowed the students to confirm answers, confront and reconcile conflicts that in the end challenge broader thinking. Even though, student participation is not a form on how learning is measured it is still important in order for any form of discussion activity to be a success. Some of the student dialogues may be deficient in quality of the writing itself but it met its purpose of delivering the message and the message received is understood by the receiver. It is likely that the learning objectives are met through online interactions activity. Thus, stating that the interaction of online dialogues helps in achieving the target of exchanging ideas and sharing information.

3.7.4 Taxonomy Collaborative E-Learning

To evaluate the students' interaction with other group members researcher used Taxonomy Collaborative E-Learning by Salmon (2008) to evaluate qualitative data. "The Taxonomy of Collaborative E-Learning offers a new conceptual framework for understanding levels of collaboration. This framework can be used to plan, organize and assess e-learning activities so participants learn to achieve collective outcomes. The taxonomy of collaborative e-learning, have seven collaboration levels. For this study the researcher only used two elements; dialogues: learner exchanging ideas in discussions, and peer review: learner exchange work for mutual critique through peer review and exchanging ideas. Scaffolding is the support given during the learning process which provide leaners the internalization of information in order to complete the task (Hamad & Abdelsattar Metwally, 2019). The key goals of the knowledge-building process are to enable students to learn and critique and also to produce stronger participation from all participants to the dialogue climate. Capacity to maintain a shared learning environment; an independent research area in which students can mainly organise their opinions in their respective fields and then present their opinions to the members of the community; a framework in which students can evaluate themselves and the members of the group and promote their opinions; and a source of encouragement (Yücel & Usluel, 2016).

3.8 Time line

A timeline for research procedure was written to ensure the study goes as planned and within the limited time of two months. The duration of this study was three months. Wikispaces classroom will be active 24hours. Students are free to log in at their own pace and time.

Time	Activities
Week 1	Permission has been sought from the Coordinator to conduct the study. For this study, the students were asked to fill and submit the consent form to the researcher. Students were brief on their English II subject. English II is one of the core subjects for the foundation program. The students were required to conduct mini-research based on the topic of technology in education. For this study, only two elements from mini-research was covered using Wikispaces classroom. The students were assigned to carry out several tasks based on the topic given. They are require to complete a mini academic writing paper and carry out presentation of the paper two weeks before the end of semester. First week – ice breaking sessions, students were asked to introduce themselves. Students were given a simple ice breaking tasks in a group
Week 2	**The first slot of tutorial** Slides on the nature of the study was presented to the students. Students were requested to form their own groups. Each group was requested to do the following; ▪ List down the name of all group members ▪ Write down their email address ▪ Nominate a group leader ▪ Name their group ▪ Read on new invention or existing technology The leader of the group must be the person who delegates, able to assist, and responsible for conveying tasks from the tutor to the group. Students sat in their group and was asked to find a topic for their mini research. The topic must include an innovation for the machine they have chosen. For example if they chose a home equipment, they are require to invent a new technology that will enhance the machine performance.

Table 1.1: Time Line

Time	Activities
	The second slot of tutorial During the second slot: face-to-face discussion. ▪ Decide one type of machine or vehicle ▪ Surf the internet for possible invention ▪ Short discussion within the group ▪ Seek approval from the tutor ▪ Further discussions on the topic At this stage students are encourage to ask questions to the tutor on the topic at hand. Duration of the slot was two hours.
Week 3	**The first slot of tutorial** In the first slot of the tutorial, the tutor explain on the website that will be their platform for their writing assignment. In this website, the students are required to use the type of machine or technology they have chosen during the class discussion. Students were briefly introduced to Wikispaces Classroom as part of learning method, where they are required to complete their writing assignments. Only two topics were chosen for study, which are the introduction and literature review. Other elements such as interview questions, findings and conclusion were taught during the normal hours of tutorial classes. Slides and notes were put up in the bulletin board (Wikispaces classroom) for the students further understand on how to use the website. *The slides are attached in Appendix II Registration of the groups to Wikispaces classroom was carried out by the tutor, using their email address. Students must log in to the website using the link given. Most of the students own a laptop and smart phone. They are able to access the site using any medium of the technology they had. Log into the website.The classroom have to be given a name, each classes must have different names, and it must be at least from three up to 32 characters long. There are other information that are necessary to be filled: the country of origin, type of education for example school, high school or universities, the subject that is to be taught in the Wikispaces classroom as for this study it is English 2.

Time	Activities
Week 3	Continue.

1. Students registration to the website

- Register using email
- Students were suggested to use their name (for easy identification by the tutor and group members) bogus names were not allowed (example ironman)

At this point students were still in the same class. They were constantly asking question about the website as soon they registered. Once, settled the students (sitting in their group formation) started to explore the website.
The second slot

At this point discussions on the topic of new technology is still ongoing, some of the groups were struggling to find a suitable technology for their paper. Constant consultation with tutor occurred until the device chosen was finally approve. It is important that each group have different technology innovation. Throughout this point, debates on the topic of emerging technologies was ongoing.

Group work

- Tasks were divided among the group members, for example, they have to prepare a draft for the introduction part which is the general information, detailed information and thesis statement. They must define the three thesis statement (main idea of the essay)
- At this point, students will sit in their group and discuss further on their tasks.

*Slides are attached in the appendix

- Tutor post the slides on the dashboard of the wiki classroom where all group members will have access.
- Notes where attached as well for the students to refer.

The moment the student began to post and edit in the Wikispaces classroom. The research screen shot and saved their interaction. This is because Wikispaces classroom does not have any tools to extract or categorise type of interaction the students are using.

The research had to manually categorised the type of interaction used during the study.

Time	Activities
Week 4	**Day 1**

First slot

The first slot in week four, students were taught on how to write an introduction for academic writing. Elements in introduction paragraph were taught and explained thoroughly. Students were encourage to write more than one page of introduction for academic writing.

Elements in introduction paragraph.

- Catch the reader's interest
  - Facts or statistic
  - A quotation
  - Brief anecdote
  - A short summary

  Students were advised to avoid using dictionary definitions.

- Contextualize the topic
  - Use historical, geographical or social content
  - Brief definition at unfamiliar terms
  - Must have citations from current articles, journals or published books (at least five to six references)

- Establishing the purpose of the study
  - The thesis statement must consist of three to four major points presenting the innovation
    - ❖ The benefit of the innovation to human and environment
    - ❖ The cost of the innovation
    - ❖ The simplicity of the innovation
    - ❖ The creativity of the innovation

During this slot students were allowed to ask questions and approach the tutor for more information or inquiries. Scaffolding between students and tutor. Students began discussion on the topic and decided on the machine or technology they wanted to invent/create/upgrade. At this point group members will choose which part they have to carry out in the introduction. Every group members were required to contribute.

Links on how to write a good introduction was posted on the class homepage. The slides of explanation from the tutor on "How to use Wikispaces Classroom Website" were posted on the homepage, as reference for the students. The slides were shown during the second slot of the tutorial class

Time	Activities
Week 5	Second slot

The first hour of the tutorial was reserved to carry out text book excises on grammar, vocabulary, technical writing (email, report, memo, notice and formal letter)

Week 5 – an introduction of technical writing: topic email

Steps in writing an email

- The format of an email
- The content of an email

Tutor uploaded notes on writing an email on website, for student easy excess and reference.

The second hour

- Students began to start exploring the website. Almost all of the E-tools are similar to Microsoft Words, the students have no difficulty adjusting to the new learning environment.

- The editing Tools - the font style, cut, paste, copy, highlight, formatting, centre, alignment, are some of the editing tools that are very similar to editing tools used in Microsoft Words.

- Students with difficulties understanding how use the tools in the website, they will ask the tutor or the any of group members for assistant. Scaffolding between peer and peer and tutor took place at this point.

Time	Activities
Week 6	**The first slot**

Lesson on how to write literature review

- Format of literature review
  - Introduction-introduce briefly and why it is significant to innovate the machine/technology.
  - Body-summary of related articles, a paragraph or two for each article. Write proper in text citation when quoting the article.
  - Conclusion-briefly explain the major findings of the articles and the need for an upgrade on the chosen machine/technology
- Requirement in writing literature review
  - The literature review must be more than three to four pages
  - Have at least four to five references
- Slides and short videos were uploaded in the website for all the groups to watch and download.

Students were taught on how to write a literature review for their mini research. This lesson include how to write in text citation and reference list (MLA format at the time of the study conducted).

This lesson continues for flowing week and it is an ongoing process.

- Students began to upload files, links and putting up comments on each other work. They each helped each other to improve their work.

The students continue using the website until the submission day of the assignments.

Table 3.1 Time Line

3.9 The Questionnaire

All the research questions were answered by this approach. The questionnaire was divided into three sections, Sections A, B and C, as explained earlier. Likert scale methodology has been used to assess the observations of the respondents. The Likert scale's invention is attributed to Rensis Likert (1931), who described this technique for the assessment of attitudes.

In the questionnaire, the respondents were given five pre-coded response from strongly agree to strongly disagree; 1. Strongly agree, 2. Agree, 3. Moderate, 4. Disagree and 5. Strongly disagree. The Mean of the sum of the five-point Likert scale is 3, therefore when calculated the Mean is higher than 3, it indicates a positive response. The higher the Mean value indicates a more positive response. The questionnaire was administered to 215 respondents.

3.9.1 The Reliability

The reliability coefficient of the questionnaire was tabulated. The Part A and Part B of the questionnaire were adopted from Ku, Tseng and Akarasriworn (2013) as cited in Hasler-Waters and Napier (2002) with the total of 30 questions and the last part of the questionnaire the set of questions were adapted from Li, Chu and Woo (2010) with the total of 20 questions. According to Li, Chu, and Woo (2010), their Cronbach alpha result was .8732. Part C of this questionnaire was slightly modified, replacing "Joyous Writing Club" to "Wikispaces Classroom".

The total questions in this questionnaire were 50 questions. The Cronbach alpha result for this questionnaire is .739. According to Taber (2018), the value of (.73-0.05) is considered high.

3.10 Qualitative Data

The data were collected from 43 active groups in participating in online collaborative writing. Each group consists of five students. The data was manually record, as the website does not have the tools to differentiate the types of interactions used by the students. The interaction phrases from group members were not inclusive in a particular group but, it was collected and randomly selected by the dialogue used. The phrases that the students used were then categorized into four responses as mentioned earlier. This study, however, did not analyze the students' writing quality. Students' writing quality especially proper use of spelling, punctuation, and grammar was not analysed. The data gathered indicated that the students interact among themselves to accomplish their work.

3.11 The Data Analysis

The data analysis used for the questionnaire were analysis is through descriptive statistics. The results were obtained with the use of SPSS version 23, where the findings of the data taken from Std. Deviation and Mean Value. To evaluate the students' attitude towards interaction with group members this study focuses on using DEGREE approach, Taxonomy Collaborative E-Learning by Salamon (2008) stated that this introduces a new analytical structure for considering the extent of cooperation.

CHAPTER 4: RESULTS

4.1 Introduction

This chapter includes the presentation, analysis, and interpretation of data that have been gathered from the questionnaire distributed to the respondents. This chapter also contains the presentation of data in tabular form along with their corresponding interpretation. The questionnaire was administered to 215 respondents. The respondents were from a local university and purposive sampling was administered. Both quantitative and qualitative data that was obtained with the use of SPSS23 Std. Deviation and Mean Value was used to illustrate and support the findings.

4.2 Demographic Data

Demographic questions were asked in Section 1 of the questionnaire. Demographic Data will explain the background of the participants. The results of the questions are as follows.

4.2.1 Age

The table below contained the information on university students' age.

University Students Age

Age	No. of Students	%
18 years old	195	90.7
19 years old	20	9.3

Table 4.1: Information on university students' age

The above table indicates that majority of university students in this study were aged 18 years old with 90.7 percent representation and only 20 university students from the age of 19 years old and above with 9.3 percent representation. This range of age implied that the majority of the university students participated in this study were aged between 18 to 19 years old at the time this study was conducted.

4.2.2 Type of Technology

This section is to identify the student's preference type of technology used to access the internet. The scopes covered in this study were the types of technology frequently used and the type of internet access that the university students used on a day-to-day basis.

The table below showed the information on university students' type of technology.

Technology Frequently Used	No. of Students	%
Smartphone	133	61.9
Laptop / Notebook	82	38.1

Table 4.2: University Students' Type of Technology Frequently used.

The above table reveals the most frequently used technology by university students. Smartphones proved to be the most favorite amongst the students with a total number of 133 at 61.9 percent compared to Laptop / Notebook with 82 university students at 38.1 percent. The results show that these two types of technologies were most favored by the university students at the time this study was carried out. Smartphones proved to be the most convenient for university students.

4.2.3 The type of internet access

The table below showed information on university students' internet access.

Internet Access (Yes)	Mean	Std. D
WiFi / Hotspots	1.00	.000
Mobile Data	1.48	.501
Wireless	1.67	.473

Table 4.3: University Students' Internet Access

The above table reveals the most frequently used Internet access by university students in this study. The most frequent use of internet access during this study was Wi-Fi/Hotspots by all the 215 university students participate. The results indicated that internet access influenced university students where they were able to gain knowledge, information, documents, and videos from accessing online resources. The vast information from the internet definitely can be added to the information provided by the educators including information from established scholars, experts, and specialists.

Data Analysis

4.3 Quantitative Data Results

Part A

No.	Item	Mean	Std. Deviation
1	The instructor acts as a referee when our members cannot seem to resolve differences	4.73	0.445
2	The support from the instructor helps my team to reduce anxiety among team members	4.41	1.059
3	My team is receiving feedback from each other	4.74	0.440
4	My team members share culture information to know each other better	4.43	0.751
5	My team members share personal information to know each other better	4.47	0.921
6	My team members share their professional expertise	4.65	0.764
7	Getting to know one another in my team allows me to interact with teammates more efficiently	4.50	0.501
8	My team members communicate with each other frequently	4.34	0.897
9	My team members communicate in a courteous tone	3.16	0.446
10	Communicating with team members regularly helps me to understand the team project better	4.43	0.686
11	My team members encourage open communication with each other	4.72	0.450
12	My team members learn how other members wish to be treated and then act accordingly	4.35	0.478
13	My team members reply all responses in a timely manner	4.77	0.475
14	I trust each team member can complete his/her work on time	3.73	0.447
15	My team trusts each other and works toward the same goal	4.63	0.620
16	My team develops clear collaborative patterns to increase team learning efficiency	4.96	0.190
17	My team sets clear goals and establishes working norm	3.99	0.453
18	My team has an efficient way to track the edition of documents	4.61	0.525
19	My team members clearly know their roles during the collaboration	4.67	0.608

Table 4.4: Questionnaire Part A

The above table of part A in the questionnaire showed positive results for research question 1: What are students' attitudes towards online collaborative writing?

(a) ***Part A***

Part A of the questionnaire answers research question 1. Research question 1; What are students' attitudes towards online collaborative writing? The above table points out the Mean and Std. Deviation for each statement. The items are sequenced according to the dimensions and from the highest to the lowest Mean. The researcher had chosen two highest mean scores from part A. Statement 17 with mean 4.96 std. deviation 0.190 and statement 14 with mean 4.77 std. deviation of 0.475. The overall result of part A of the questionnaire shows a positive result from the respondents. The optimistic finding of this research indicates that the attitude of students towards online collaboration is very promising. The students show positive attitude to learn in a less challenging environment, where they are able to collaborate and encourage each other. Fishbein and Ajzen (1980) described that attitude as a learned predisposition to respond in a consistently favourable or unfavourable manner concerning to a given object. The condition will influence the attitude of the learner. Positive students interactions will go beyond the classroom, good communication skills that the students learn from interactions will benefit them to develop learning

Statement 17 is the highest "My team develops clear collaborative patterns to increase team learning efficiency" with mean 4.96 std. deviation of 0.190. Collaborative patterns refer to sharing work in a team, each member understands their responsibility when carrying out tasks given to them. When each group member plays a significant role their performance will surely increase. A positive attitude will lead towards interest and it may influence their performance in acquiring the targeted language. Statement 14 is the second-highest "My team members reply to all responses in a timely manner" with mean 4.77 std. deviation of 0.475. Social interaction allows a group of students to understand or see from the new perspective of others, meaning

that they are likely to engage in deep processing in learning (Tsai & Tsai, 2013). Scaffolding from group members will encourage positive attitude towards low proficiency group members. It will instill the feeling of an opportunity to improve and not looked down by others due to their low proficiency in English. Students with positive attitudes towards e-learning had a positive impact on their motivation as well as self-esteem (Nassoura, 2012). Students' needs analysis is a simple but yet a very powerful process. It will create need-satisfying and drives students' behaviour which in turn benefits the technique of learning. According to Xu et al., (2014) stated that personalized virtual online learning environments improved students' exam performance, satisfaction and self-efficacy compared to non-personalized virtual learning environments.

(b) ***Part B***

No.	ITEM	Mean	Std. Deviation
1	I like working in a collaborative group with my teammates	4.82	0.398
2	I like solving problems with my teammates in group projects	4.67	0.616
3	Interacting with the other members can increase my motivation to learn	4.82	0.398
4	I have benefited from interacting with my teammates	3.83	0.378
5	I have benefited from my teammates' feedback	4.68	0.607
6	I enjoy the experience of collaborative learning with my teammates	3.82	0.386
7	Online teamwork promotes creativity	4.83	0.374
8	Working with my team helps me produce better project quality than working individually	4.81	0.402
9	My team members are sharing knowledge during the teamwork processes	3.83	0.374
10	I gain online collaboration skills from the teamwork processes	4.80	0.424

Table 4.5: Questionnaire Part B

The above table of part B in the questionnaire showed positive results for research question 2: What types of interaction do the students use among group members in online collaborative writing?

The above table points out the Mean and Std. Deviation for each statement. The items are sequenced according to the dimensions and from the highest to the lowest Mean. The researcher had chosen two highest mean scores from part B. Statement 7 with mean 4.83 std. deviation 0.374 and statement 3 with mean 4.82 std. deviation. The overall result of part A shows positive result from the respondents. Statement 7 is the highest "I like working in a collaborative group with my teammates" with mean 4.83 std. deviation of 0.374.

According to Zhu (2012) stated that collaborative learning is a social interaction that involves a community of learners and teachers, where members acquire and share experience or knowledge. The students show a positive attitude towards interaction and increase their interaction with instructors and learners. The attitude students, in turn, develop their own knowledge because much of learning inevitably takes place within a social context of mutual understanding. Interaction between participants can stimulate discussion in order to disclose otherwise concealed topics. Online discussion and peer review encourage students interaction and able to scaffold teaching among themselves. In scaffolding environment, students are free to ask questions, provide feedback and support their peers in learning new material (Hamad & Abdelsatter Metwally, (2019). Scaffold among group members facilitate the internalization of knowledge required by them in order to produce a good writing product.

Statement 3 is the second-highest "I like solving problems with my teammates in group projects" with mean 4.82 std. deviation of 0.398. According to Yusof and Correia (2018) highlighted that learner-learner interaction is the most effective way of developing a sense of community, without which learners may feel disconnected and removed from the learning environment. Interactions between individual within a group can induce positive attitude which will lead towards achievements in learning. The interaction in this study is a collaborative situation which more group-related than task-related. Group-related interaction concentrated mostly on the coordination of group work, such as planning and organizing group activities (Vuopala, Hyvönen, & Järvelä, 2016).

(c) ***Part C***

No.	Item	Mean	Std. Deviation
1	I like writing collaboratively on "Wikispaces Classroom".	4.72	0.491
2	Compared with writing with pen and paper, I prefer writing on "Wikispaces Classroom" more	4.91	0.383
3	"Wikispaces Classroom" improved my writing interest	4.23	0.731
4	I participated in writing more because of "Wikispaces Classroom".	4.56	0.818
5	I stayed on writing more because of using "Wikispaces Classroom".	4.25	0.432
6	I hope to continue using "Wikispaces Classroom" next semester.	4.55	0.687
7	I learned a lot from my group members, which enriched my writing content	4.53	0.696
8	On the whole, the conflict among group members brought more benefits than disadvantages.	4.04	0.766
9	I think the contribution of every member is important. In order to write the best composition, everyone need to try his/her best	4.53	0.747
10	I think if students collaborative successfully in a group or not affect collaborative writing significantly	4.43	0.523
11	I think interaction among students can better improve my writing ability compared with the only interaction with teacher	4.87	0.342
12	Compared with the traditional writing, interaction in "Wikispaces Classroom" improved my writing ability	4.66	0.476
13	I feel that teacher's guidance is very important in our writing process.	4.78	0.658
14	I feel that teacher's conduction for group writing is very important, for example, how to group students, discuss the topic before writing and so on.	4.00	0.659
15	I think that during our collaborative writing process, the teacher did not provide us with enough help and conduction	2.19	0.390
16	Since more people can know our compositions, I become more active in writing.	4.76	0.429
17	I think there are more audiences when we write on "Wikispaces Classroom", which is one advantage of this writing environment	4.14	0.903
18	The interface and features of "Wikispaces Classroom" were easy to be understood.	4.13	0.586
19	Writing on "Wikispaces Classroom" brought us more advantages than disadvantages	4.16	0.716
20	When writing on "Wikispaces Classroom", it was easy for us viewing and editing our compositions	4.39	0.789

21	The technology characteristics of wiki helped us improved our writing result.	4.05	0.744

Table 4.6: Questionnaire Part C

The above table of part C in the questionnaire showed positive results for research question 3: What are students' perception of online collaborative writing?

Part C of the questionnaire answers to research question 2. Research question 2; What type of interaction did the students used among group members in online collaborative writing? The above table points out the Mean and Std. Deviation for each statement. The items are sequenced according to the dimensions and from the highest to the lowest Mean. The researcher had chosen two highest mean scores from part C. Statement 2 with mean 4.91 std. deviation 0.383 and statement 11 with mean 4.87 std. deviation of 0.342. The overall result of part C shows positive result from the respondents.

Students' evaluation of teaching techniques provides a wealth of information about their experiences in learning. Furthermore, examining the effect of collaboration on problem-solving found that collaboration improved learner performance regarding higher-order thinking activities when learners discussed the problem and suggested potential solutions to the problem. Students are able to improve faster because of the exposure and engagement on the learning resources from educator, teachers, and friends. According to Yusof and Basar (2017) mentioned that the ability to compare and comment on other groups' works positively affects students' motivation by helping them improve and learn from better groups and by helping them avoid mistakes made by others.

Statement 2 is the highest "I like writing collaboratively on "Wikispaces Classroom". with mean 4.91 std. deviation of 0.383. According to Hojeij and Hurley

(2017) stated that pairing students with different abilities help both learners to increase each other's writing proficiency. As a result, the development will occur through peer review when the learners interact positively in oral and written communication that includes asking questions, providing feedback, and instructing on error correction. When learners work with others, an obligation to meet the group's timelines and collaborative goals persist (Roberts, Blanch & Gurjar, 2017). According to Robert et al., (2017) reported that the resulting novelty that comes from a continuum of choices that present themselves as writing circle groups draft, revise, rework and share the ideas and comments of their peers may sustain motivation and encourage learners to explore and improve their writing. Learners had the opportunity to revise and improve their writing through feedback from their peers, an opportunity that they may not have had in the absence of wiki technology (Aydin, & Yıldız, 2014). Farrah (2015) mentioned that they work collaboratively and engaged intellectually, cognitively, socially to achieve their learning objectives. Thus the results in this study clearly indicate the students' perception is a mostly positive attitude towards online collaborative writing.

Statement 11 is the second-highest "Compared with writing with pen and paper, I prefer writing on "Wikispaces Classroom" more " with mean 4.87 std. deviation of 0.342. Students have an opportunity to demonstrate their individual and collective abilities through authentic assessments on group assignments and activities and build upon feedback provided by their peers (Stephens & Roberts, 2017).

According to King (2015) observed that students collaborating in writing and revising articles became deeply invested in that role, finding themselves "writing not as students, but instead as writers". If students are invested in their online writing,

they are likely to be motivated to engage in it more fully and more frequently. In itself, that is likely to result in gains in confidence and in holistic writing ability (Godwin-Jones, 2018).

4.4 Qualitative Data

In this study, the researcher focus on the analysis of peer computer-mediated interaction during online collaborative learning processes. The qualitative data collected is answering the research question 2 "What types of interaction do the students use among group members in online collaborative writing?" The Taxonomy of Collaborative E-learning activities is grounded in the results of a qualitative study that explored an in-depth view of interaction the students used while collaborating online. It also enables to identify students' attitude towards while interacting in an online environment. Scaffolding is the support given during the learning process which provide leaners the internalization of information in order to complete the task (Hamad & Abdelsattar Metwally, 2019). The students' comments were investigated from the perspective of the interaction from the comments and responses of group members; the study focusing only on the entire group's interactions.

The Taxonomy of Collaborative E-learning was used to further understand the interaction between group members. The study implement only two of the elements in the taxonomy; dialogue and peer review. For this qualitative evaluation, only four responses were analysed; exchanging ideas/suggestions, clarification, asking question/agreement and compromising. To note most of the dialogue and peer review used by the students from each group are quite similar and therefore the dialogues were categorized as mentioned earlier.

4.4.1 Interaction Phrases

The interaction between students is inextricably linked to the individual learner's satisfaction with online learning and whether he has a positive learning attitude (Guo, Gong, Shi & Luan, 2018). Interactions enable students to communicate, exchange information, actively working with people. For this study the language that the students used were informal language, most of which they used short forms and added several emoji at the end of their sentence. Students' interaction can include formal collaboration and informal social interaction, which can encourage students' comfort with each other, especially during online collaboration. In this study, students show positive attitude during online discussions. Interaction between students indicate scaffolding, in which it display a unique teaching style that offers the incentive for students to be more active and motivated in their learning.

The process of learning was a success through collaborative attitude, from their sharing and exchanging ideas among group members and being able to get feedback and clarify ideas through interaction among group members. The responses are as follows:

(a) ***Exchanging ideas, suggestions, and information***

Referring to the results it indicated that students used the medium of an online platform to exchange ideas, give suggestions and adding information to their work. According to Ware, Kern and Warschauer, (2016) stated that instructional affordance of social media can facilitate students' exchange of ideas and sharing of knowledge, develop their academic identities as authentic writers, strengthen their awareness of audience and authorship, enhance their confidence in and motivation for writing, and ultimately promote their writing skills and language development. In addition, Dascalu, Trausan-Matu, McNamara, and Dessus (2015) claimed that participation represents the active involvement of members in ongoing computer-supported collaborative learning (CSCL) conversations, which can be seen as an independent process that does solely consist of collaboratively exchanging ideas with other participants.

Below are several dialogues of exchanging ideas / sharing ideas/information between group members during online collaboration.

1: "I just Google "technology at home" and specify the year then you will get your article choose the simple one madam said, not too lengthy"

2: "guys.. this is the link on how to write the citations, madam said to use APA format. (link)

3: "I will help you, min type google scholar and then you type our title but you have to choose the year first then articles will appear according to the year… make sure u read the title before you choose"

4: "I have share a link on prezi please download them then its much easier for you to do your work. (link)

5: "to note introduction only two pages not more than that lar.. and make sure each point must have supporting details"

The above dialogues showed that students are helping each other and contributing in completing their tasks. According to Savolainen (2017) stated that information sharing appears as an activity through which ideas, opinions facts and documents are transferred from an individual (or group) to other people, thus defined the process of information sharing incorporates two major aspects, i.e., giving information to others, and receiving information that has been provided by the information giver. The dialogues suggest scaffold among the group members.

The first dialogue showed that the student indicated how he retrieved the information and explained the process to the group '*I just Google "technology at home" and specify the year..."*. The student did also mentioned on the information he obtained from the class tutor. Second dialogue "*guys.. this is the link on how to write the citations"* the student suggested a link to the group on how to write the citations he did also mentioned "*madam said to use APA format"* in which indicated more detailed information he shared with the group. The third dialogue displayed a more detailed in sharing ideas it was more on assisting to one individual but yet posted for every group member able to see and use the information given. *"I will help you, min type google scholar and then you type our title but you have to choose the year first then articles will appear according to the year.."* the indication of a student name was mentioned in the dialogue 'min'. The rest of the dialogue was in the form of advice. The fourth dialogue was similar to the second dialogue. These types of dialogue frequently occurred during the earlier interaction stage among the group members.

The final dialogue, *"to note introduction only two pages not more than that lar.."* the student dialogue was a reminder but yet still have information for other group

members to take note "*only two pages not more*". This dialogue also pointed out "*and make sure each point must have supporting details"* on type of details needed in the task "supporting details". According to Chun, Nam and Koo (2016) information sharing was operationalized as an activity constituted by delivering ideas and opinions articulated in written messages.

Meaningful discussions in this study scaffold students' creative thinking, problem-solving and knowledge construction. Students asking information and giving information generate peer scaffolding. According to Van Lier (1996) advances three essential affective factors for this input and output thesis, which include awareness: autonomy and authenticity. To achieve these variables, he stressed that peer interaction is essential to provide the necessary scaffolding and motivation. According to Lang (2018) reported that peer scaffolding is common in English-majored interaction, where it has the functions of providing vocabulary, correcting wrong expressions, providing opinions, explaining the task, inviting others to engage in the discussion. Scaffolding refers to guidance provided to support one's independent functioning (Vygotsky, 1978). According to Luo (2016) peer feedback is a form of formative peer assessment in which peer learners provide comments, advice, and suggestions to improve each other's work.

(b) **Clarification**

Clarification is offering essential meaning back to the speaker and understood by the listener, on what they have just said. It is an action to check that the listener's understanding is correct in order to clear any confusion or misinterpretation. Responses to peer review were labeled as a response to a query, feedback clarification, feedback agreement, replacement confirmation, feedback negotiation, and feedback

refusal (Thouësny, 2013). Clarification is crucial in communication especially when the topic involves much information. It can be very difficult for some of the processes of communicating involves complex information. Therefore, clarification provide new information in which with clarification it will offer a more concrete understanding of the question asked. According to Baharun, Harun and Othman (2018) mentioned that during the interaction, learners get to ask questions, seek clarification and request for an explanation if there is a communication breakdown. They added, learners also receive feedback on the form and meaning of their messages, whether their messages are clear or otherwise. If their messages are unclear, learners would be informed in many ways by the other speakers. For example, the other speakers may ask questions, seek clarification and request for an explanation. Thus, learner needs to adjust their messages so that the messages become clear, comprehensible and can be understood by the other speakers. This leads them to modify their speech to enhance message comprehensibility.

Below are several dialogues of clarifications during the group interactions in Wikispaces Classroom.

1: "there only five paragraphs, the first one is the introduction, 2nd, 3rd,4th are the main points and last paragraph is the conclusion am I right?"

2: "what I mean was that we could … "

3 "what I am trying to say.. in the introduction we must have one introduction paragraph mam said may be up to 50 words or more"

4: "okayy acknowledgment only? Zana case finding? Design banner? Please clarify"

5: "are you sure you want me to add it in the paragraph?"

The first dialogue, the student give information *"there only five paragraphs, the first one is the introduction, 2nd, 3rd,4th are the main points and last paragraph is the*

conclusion at the end of the dialogue the student asked for clarification " am I right?" indicating that the student needs confirmation of the information. The second dialogue *"can u explain please ... "*the student asks to explain the information and then inform that he was confused *"I m a bit confused"*. The dialogue indicated that even though the information was received the student needs further explanation. He clarified that he needed to be assisted in the situation. The following dialogue, the student was clarifying the information "*what I am trying to say .. in the introduction"*. Next dialogue; *"okayy acknowledgment only? Zana case finding? Design banner? Please clarify"* in this dialogue there were three questions seeking for clarification from other group members and at the end of the dialogue the student emphasised on "please clarify". For the last dialogue, it showed that the student asking if it is necessary to design the banner using the Photoshop software and did ask for clarification from other group members through the speaker. According to Zhu and Carless (2018) reported that the data from recipients who had the opportunity to discuss written feedback with their peers and those who did not, show how they could engage with feedback as they requested clarification, explained their writing intention or articulated their response towards received comments. In this study, students were very responsive towards other members' feedback and display positive attitude towards comments in their work. Clarification can bring up different. perspectives and perhaps new ideas which in turn can benefit the outcome of the end product.

(c) **Question**

Students can build their knowledge by asking questions and students or group members are able to use the information for their future use. Students were able to develop and construct their learning from the information they get from their friends. As a result, the development will occur through peer review when the learner interacts positively in oral and written communication that includes asking questions, providing feedback, and instructing on error corrections. This refers back to Vygotsky (1978) questions are one case in point of symbolic linguistic tools that semiotically mediate, assist, and scaffold mental activity during both formal and informal instructional activity. Questioning can scaffold better performance in problems solving, making justification and monitoring for evaluation.

Below are several dialogues on 'question' during the group interactions in Wikispaces Classroom.

Question

1: "how do we write the reference?"

2: "question, in the main idea how many points should we put in?"

3: "Jo, when are you going to put up your work here?"

4: "how many paragraphs do we need for introduction?"

5: "where are your citations for the quote?

Questions were asked by the students who intended wanted more information on a particular topic or issue. All the above questions indicated that the students were asking for more information. Asking questions can also encourage others to participate in answering and debating the question at hand thus this help to improve

and promote interactions among the group members. Thus, asking questions is important in a good group discussion as it is necessary to check the accuracy of the information and it is also a form of technique to encourage other group members to participate in the discussions. The asking of question during online discussion provides an opportunity to refine the information at hand and at the same time gain new ideas or perspectives from other group members. Questioning means thinking, and thinking is manifested in the form of questions (Santoso, Yuanita and Erman, 2018). Through questioning, Socrates encouraged his students to explore prior-held beliefs and subsequently to build stronger and more scholarly views (Nappi, 2017).

(d) ***Compromising***

Compromise is a settlement of difference in an agreement especially when one own idea involves in a conflict, offering a compromise which may win and lose. Adjusting conflicting viewpoints through reciprocal modification of demand is important in order to ensure success in accomplishing the task. Compromising with others will enable to work with less conflict and this act will revolutionize professional relationship. Previous research has indicated that compromising is a useful strategy for solving interpersonal conflicts (Lin, Lin, Huang & Chen, 2016).

Below are several dialogues of compromising between group members during online discussions.

1: *"I know but.. between goggle and safety jacket ... I would say go for both maybe safety jacket, as it has safety measures for the cyclist that's it has many benefits "*

2 *"looking at Sheron washing machine it has many functions, but the high tech bike sounds is way better, we can add high tech features focusing on safety"*

3: *"hmmm why not we look more info on this machine, it's the latest right I'm sure there is more technology embedded with it."*

4: *"I get where u r going but we need to consider the design of the features lets think on it"*

5: *"I get yr point but the idea is to see which benefited to our lives"*

The first dialogue, this student wrote "*I know but.."* showing that he understood the explanation given, at the same time he is trying to compromise towards the second option which offers more advantages "*as it has safety measures for the cyclist that's it has many benefits".* The second dialogue indicated that the student compromised between two ideas *"looking at Sheron washing machine it has many functions," the* majority of the dialogue showed compromising towards other group members ideas. Asking or seeking compromise from other group members shows the willingness to receive comments and admitting the need to change for the better of the group. Adding to this the student support other group member's ideas by pointing out some information. The third sentence indicated that this student asked other group members to consider looking into the new technology of the particular machine. The student was asking other group members to participate in considering to accept this idea or support the idea. The fourth sentence, *"I get where u r going but we need to consider the design of the features lets think on it"* showed that the student understand the idea but at the same time having conflict accepting the whole idea. The student did not directly reject the idea but carefully stating the importance to reconsider the features by stating "let's think on it". The final sentence *"I get yr point but the idea is to see which benefited to our lives"* is similar to the fourth sentence. The student understands the other member arguments but he reminded the group one of the key factors in the research was to see if the new feature benefits the end-user. The responses may have influenced the students' attitude and perceptions.

The qualitative data result of these four elements; exchanging ideas, clarifications, question and compromising during online interaction showed a positive outcome. The students were very responsive towards their online community and able to contribute towards the discussions.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.1 Introduction

Determining the students' attitude and perceptions during online interactions via online Wikispaces Classroom collaboration writing website from the perspective of foundation-level students were the objectives of this study. Writing English assignments have been proven to be challenging, especially for second language learners. Humphries (2011) indicated that students are worried with second-language performance , which means that their second-language learning ability is substantially decreased, with a possible negative effect on performance.

These elements combined to trigger the need to understand the students' attitude, perception towards online learning while interacting in collaborating. Bustamante and Eom (2017) stated that attitude plays a significant role in promoting writing motivation and achievement, thus developing a positive attitude towards writing may help students become more motivated to lead to academic success. Students' perceptions of interaction and towards online learning are significant as today's students have high expectations of their learning environment which initially brings forth their willingness to cooperate during the engagement process.

This study is to support the theory of the importance of positive attitude toward performing in the second language, especially towards collaborative writing an academic paper in the English Language.

5.2 Summary

This study aims to unveil the need to identify the perception, attitude and interaction of the students towards/during online collaborative writing. These elements are essential in order to identify its effectiveness and learners' receptiveness. The study method used is concise in objective terms, where a three-part sample questionnaire was circulated to 215 local university students. Quantitative results is evaluated using Statistic Product and Service Solutions (SPSS) version 23.0.

5.3 Key Finding 1

The findings showed how the students' attitude in developing an interest in the new learning technique which was online collaborative using the Wikispaces Classroom website. These positive attitudes may be developed when students seem to be attracted towards communicating during online classes because they are able to learn at their own pace, using their skills to interact among teachers and other students in the network community. Scaffolding among group members allowed them to exchange ideas and information, debate and argue on topic at hand. According to Sawyer (2014), learners are active participants that can take care of their own learning processes but also facilitate the learning of others. Collaborative research that will demonstrate the success of students interacting together through research may depend on the nature of the relationship with the participants of the community (Webb 2009).

Powell et al., (2015) indicated that online learning has developed from web-based distance learning services and has come to reflect the leading edge in rethinking course structures and customising teaching using multimedia resources and creative curriculum delivery methods. Jin (2017) stated that online involvement in interactive learning environments can be described operationally as a learning process by

accessing a variety of learning environments; maintaining relationships with peers and instructors; doing individual or group work; and exchanging ideas or learning materials;. The positive attitude displayed by the students in their answers indicated that they perceived the environment of working together cooperatively. In this environment, the students are responsible for their own behaviour and learning. The condition mentioned by Belgrave is the environment that the students were in (Wikispaces Classroom website) and the support from friends (collaboration) as the scaffolding for the positive attitude that the students indicated. There is a good possibility that students with a negative attitude can change to a positive attitude when they are exposed good and active environment. Online learning helps to eliminate borders and barriers both socially and physically. This emphasis by Burleson and Thoron (2014) mentioned that the more the student understands the basic needs of each student, the more likely you are to help remove obstacles from learning so that learning can be enhanced and maximized. Supportive interactions can be considered as scaffolding by peers.

The positive educational setting is crucial for the development and influential towards students' attitude and perception towards the context of learning. Meeting the individual needs of each student can be a challenge but it is significant to understand and find out what the needs are in order to prepare them to become actively involved throughout the lessons. According to Mega et al., (2014) a positive attitude has greater weigh on self-regulated learning and motivation than a negative attitude. Interacting to gain services or information is known as reciprocal altruism.

Altruism plays an significant role in the exchange of information between individuals (Chen, Fan & Tsai 2014). Reciprocal altruism is where other members of

the society would be able to provide this support to the person in need, because they expect equal support to be offered should they need it.

5.3.1 Conclusion

The result of this study revealed that the university students were interested and motivated in the collaborative activities using Wikispaces Classroom website and their platform of online collaborative writing. Due to the fact that people interact with influence one another every day, they have established the ability to make communications via interactions and the ability to work effectively. Attitude is often the result of experience during their upbringing and these influence their behaviour. The act of interacting and influencing each other every day has developed the ability to make the interactions precede efficiently and efficaciously. Interacting or communicating with other people to gain outcomes in exchange of goods or services (scaffolding) from other people will in the end give a purpose in meaningful learning. It shows that meeting the individual demands of each student is crucial for them to become active, independent, alert and able to be effective learners for life. The online community has in fact brings out positive attitude from the students and they are willing to explore more into this technique of learning. Good team building will help in establishing strong online community. It is crucial for educational practice to be more responsive towards the students' attitude, strengths and learning preferences of individual students in which will create enjoyable learning experiences that will lead towards successful learning experience.

This is necessary to take into consideration the mindset of the students during the learning process, as this would help improve the inspiration for involvement in the topic they have been focused on.

5.4 Key Finding 2

The finding shows how students' online learning interaction while engaging in online collaborative writing. Interaction and collaboration are more likely to take in an environment where students have the authority over their assignments and activities. These activities that they are engaged in is called collaborative learning environment. University students preferred group work especially in making corrections, adding more ideas or information, giving comments to each other in order to improve their final product. The result showed discussing online helps those to be more relaxed, giving them space to be confident with their views and suggestions. According to Tripathy (2018) claimed that teaming is worth learning because it is essential for improvement, problem-solving and innovating. Moreover, Jang (2015) stated that online collaborative learning takes place as participants constantly exchange expertise and thoughts, challenge one another, and discuss facts together in a participatory and constructive manner through the process of knowledge sharing and community building. According to Yücel and Usluel (2016) improvements in information building and communication mechanisms for the students can be seen in the engagement and involvement of the students. In addition, Kalin (2012) stated that collective learning facilitates awareness, reasoning and behaving in the classroom by enabling students to speak to each other and to explore different definitions, and that in the end , students will cultivate a culture of mutual understanding and appreciation, belonging to each other.

In a collaborative learning environment, students help one another to compose a writing task. In order to collaborate effectively, community leaders need to identify the obstacles that could impede their cooperation and to build effective approaches together to address these difficulties by contact with others. (Malmberg, Järvelä,

Järvenoja, & Panadero 2015). According to Kennedy and Miceli (2013), people interacting with others appeared to have more favourable views and enjoyment of wikis, because they were more likely to feel connected to others or to have a sense of culture. There is a good possibility that students with a negative attitude can change to a positive attitude when they are exposed good and active environment.

This meaningful interaction and collaboration met the university students' needs, feelings, likes and dislikes. According to Yücel and Usluel (2016) stated that the willingness to propose various views in a constructive and interactive manner to explore these views in depth and to establish opinions by allowing the growth of expertise can be considered challenging. But through this digital platform, this difficulty can be dealt with. Throughout interaction, learners improve their communication skills with teachers and learners and, in exchange, improve their chances of developing their own expertise. Student learning outcome during online interaction was as good as or better than traditional learners. They will meet at a point where both will collaborate to achieve the target of the task or completing the task given. Online conversations clearly displayed that the students are able to interact with one another and they are able to express their view without feeling vulnerable or inferior as most cases in face to face group work. As Yeh, Tseng, and Chen, (2019) argued that with face-to - face peer feedback, electronic peer feedback provides students with a range of learning opportunities, such as managing time and location limitations, developing less challenging environments, and facilitating constructive text sharing.. According to Stephens and Roberts (2017), students have the ability to show their individual and collaborative talents through school task and activity tests and to draw on input from their peers. Zydney and Chen (2014) found that two techniques were especially successful in creating social presence: social-presence

signals (such as promoting engagement and exchange of personal opinions) and required / graduated discussions. They concluded that the use of social cues is especially important as it helps create a cohesive and supportive learning environment, which in turn encourages participation and enhances student satisfaction. In addition, Nicol, Thomson, and Breslin (2014) reported in their analysis that peer review indicates that feedback recipients gain greater media knowledge as part of their improved writing skills. Student authors have also been able to do even better through apprenticeship instruction, comparable to children with parental supervision who have been able to learn more than through individual learning (Vygostky, 1978).

5.4.1 Conclusion

A main result of this research is that the peer review process will improve individual feedback systems and encourage students to evaluate and calibrate internal and external reviews in ways that benefit their learning. The problem with peer analysis is that, as the user is subjected to input from the client via conversation, they will receive additional gains when they are encouraged to do more and deeper self-reflection. The explanation that peer review appears to be more effective than obtaining is that it is more cognitively engaging: including higher-order mechanisms such as applying guidelines, diagnosing problems, and proposing alternatives.

The online engagement in this research encourages peer review and positive communication focused on peer understanding, in particular on the expectations and perspectives of each other.

5.5 Key Finding 3

The finding shows how the students' perceptions towards online collaborative writing are encouraging. In an online collaborative writing environment, each group member or a contributor has the ability to edit, add and remove text. It is an ongoing process where everyone took part and make changes to the text. Online collaborative writing can produce projects that are much creative, richer and challenging. According to Xu et al., (2014), virtual online learning experiences increased student performance, retention and self-efficiency relative to non-personalized virtual learning environments.. Online learning uses technologies to infuse creativity, foster and to convey a much advance learning environment for students. Nomass (2013) argued that technology plays a significant part in the growth of human society today. The widespread of technology adoption of technology in every classroom has completely changed how the methodology of teaching and learning. Studies showed that school teachers indicated that technology assists the learning process especially in reinforcing and expanding the content of the lesson. The positive outcome of students' show how using technology in the classroom has helped keep the students stay engaged and show enthusiasm as teachers are explaining lesson using interactive presentation tools. Furthermore, Cheung and Slavin (2012) stated that the use of technologies in classrooms is most successful when partnered with teacher instruction. Callaghan and Bower (2012) noted that the crucial role of teachers in facilitating immersive and successful online learning in social networking contexts is important.

Researchers concluded that these conditions foster higher levels of student enthusiasm and commitment, and enable students to use higher-order thinking.

5.5.1 Conclusions

Interaction among students helps to improve the students writing ability. It is gold-directed behaviour, effort, and energy, initiation, and persistence in order to achieve a successful outcome from the learning experience. This indicated that the university students' agreed that using Wikispaces Classroom website as an online platform has enhanced their communication and writing skills. Wikispaces Classroom provides a space for classroom discussion between group members, able to give feedback motivate each other in order to produce a better quality product. Woo, Chu, Ho, and Li (2011) pointed out that Wiki offered in-depth information on the styles of editing methods and helped to provide the required guidance and input as well as scaffold their editing process. In this study, although students are given the freedom to complete their task as a group they still need guidance from their tutor or lecturer. Wikispaces classroom at the time this study was conducted had proved to be one of an online platforms that able to carry out online writing collaboration. The positive outcome from online learning in this study; student collaboration with class material, a stronger sense of community among students, exchanging ideas, sharing information with each other and giving positive feedback among group members.

5.6 Qualitative key findings

In this study, students are able to develop their self-regulating abilities during the discussions and get feedback from them. They established problem-solving skills from the peer review they get from other group members, they learned about regulating their own learning. Scaffolding through interaction facilitated through online collaboration supported cooperative learning has the capacity to build shared understanding and critical thinking. Blair, Maharaj, and Primus (2016) proposed that a potential research should also look at how time is spent in the flipped classroom, in particular the nature and content of the tasks and engagement that students are involved in, and how this affected results. This study clearly showed that students were active during online interaction. The types of interactions common used by the students reflected in Taxonomy Collaboration of E-Learning. By means of completing their tasks, they have created a community of their own and build trust in the responsibilities to ensure their aim is achieved. Bouwmans, Runhaar, Wesselink, and Mulder (2017) argued that participatory decision-making means that the decision-making process is not controlled and reserved for team members and a few teachers, but that each team member has the ability to take part in decision-making. According to Farrah (2015), the involvement of learners of immersive online community learning activities is one of the most relevant requirements for successful teamwork.

5.6.1 Conclusion

The result for this data supports the conceptual framework, all three were interrelated to each other. Interaction among students can benefit them through the learning process. This is supported by Farrah (2015) claimed that the more knowledgeable learners can help less knowledgeable learners and thus creating a conducive educational environment. Therefore, motivation and participation are

maximized as learners apply active social interaction. Today education, web-based environment are used for knowledge building, sharing information, problem-solving, collaborate, negotiate and compromise. In this study, students' perception of online collaborative writing proves to be positive and encouraging. Virtual immersive online learning experiences are more likely to thrive if participants are given the ability to exert full control over the learning process. (Farrah, 2015). The qualitative data result of these four elements; exchanging ideas, clarifications, question and compromising during online interaction were the types of interaction used by the students during online collaborative writing.

5.7 Discussion

After analysing students' attitudes towards the collaborative writing tasks given in the Wikispaces Classroom website it is clear that online platforms are able to help to inspire a positive attitude among the students. Scaffolding supports the students' learning especially when they are working collaboratively online.

Palincsar and Brown (1985) noted that scaffolding is no longer limited to experiences between teacher and student or parent and child, but has grown to include peer interactions and objects such as books, diaries, images, and computers that promote learning. Collaborating among peers that creates an atmosphere of understanding between both parties; more and less competent. This type of theoretical framework refers to 'Scaffolding'. In which when it is refining towards the assisting from peers then it becomes peer scaffolding. Through peer scaffolding, Nguyen (2013) reported that the student writer has shown increasing self-regulation and has been a more autonomous writer and critic, while the student reader has learned facets of L2 research, revision, strategic assistance and cooperation.

The three aspects; attitude, interaction and perceptions support and apply the scaffolding theory in which they support each other in order to accomplish the tasks given. Scaffolding theory was used in applying the effectiveness of the Wikispaces Classroom website in online collaborative writing. The environment of useful editing tools invites group members to actively participate in online discussions. An online classroom is using software e-tools to scaffold students in all their tasks. Scaffolding should be used at any point of contact between teachers and students at the stage where feedback and examples are given, by modelling, contact and assessment.

In this study, the scaffold can be found in two major situation student to student and student and technology. Even though mentioned are a major reason, intervention or teacher/tutor advice plays an important role to ensure the students stay within the scope of discussion or topic. The teacher set collaborative learning goals, provided instruction, and assessed students' collaboration (Le, Janssen, & Wubbels, 2018).

According to Kim and Hannafin (2011), technical learning resources can be used to support scaffolding by offering a range of scaffolding features. Scaffolding facilitates social interaction, sharing ideas, information, having a discussion, assisting, giving example and editing others in the process of learning. Online learning uses scaffolding with technology to assist students and teachers to collaborate and produce a good quality writing product. Therefore, this study theoretical framework focuses on the scaffolding theory. The interaction result in this study showcase peers feedback theory plays an important role until the end of an online project. As for teachers, they also offer scaffolding in setting up the environment which offers scaffolding among the students. Ferguson-Patrick (2018) stated that the role of the teacher is vital to the engagement of students in the classroom in order to better their performance, and that

it is the teaching activities of teachers that help to build these collaborative working habits. Zheng et al . (2018) concluded that, in order to promote successful teamwork, teachers need to specifically plan learning activities that lead to a range of stages, such as introduction, discovery, agreement, co-construction, and shared writing or simultaneous collaborative writing. Hudson (2018) claimed that there are benefits of working with a instructor by using a wiki for learning, such as getting input and online help from an instructor, having assignments and exercises correctly organised and set up for online use, and being able to collaborate collaboratively with others.

Teachers will provide input on both the success of the students and the progress of each community by making comments in the comment box, in the direct messaging platform or on the website.

5.8 Pedagogical Implications

The findings of the study revealed several significant results on students' attitude and perception towards online collaborative writing, and students' perceptions towards online learning while engaging in interactive collaborative writing during online classroom.

One of the most commonly debated incentives for using social media in writing education is the teaching of students in shared work and discourse-sharing groups that are common of most technical and academic settings (Zheng et al, 2018). According to Uluyol and Sahin (2014), inspiration, resources and incentives are essential factors in increasing the commitment of teachers to enhance the extent and standard of ICT usage in classrooms. Teachers play a significant role in developing students ' awareness through their practise, vocabulary and instructional techniques.

Teachers have positive attitudes towards ICT in education which were predicted by computer attributes, cultural perceptions and computer competence (Baturay et al., 2017). Teachers' vision towards the use of technology in the classroom will shape the students' attitudes towards technology and it is helpful especially in their everyday educational environment. There is not a day that goes by that the students did not use their gadgets to acquire or complete a task. Teachers, educators have to keep themselves up-to-date with new technology at hand. According to Hodges, Carpenter and Borthwick (2017) stated that teacher education programmes will establish the new teacher on a solid base in current theory and experience.

New advances in psychology (neuroscience, brain science, pedagogy, and psychology theory), rapid technical changes, and innovative methods for tracking outcomes will all lead to improved learning outcomes. Additionally, prospective teachers should be presented with the knowledge required to meet the learning needs of emerging students and to consider how to introduce current technical advances of classroom environments for the good of their students. Yet there is always a critical stage that happens after the equipment has been chosen. Teachers also have trouble learning to incorporate modern technology. When they find a challenge and have no other means to fix it, the application of technology will not be effective. Adding to this, Hodges, Carpenter, and Borthwick (2017) highlighted that learning networks will allow teachers to access the required resources for the introduction of new technology. Teachers who start using networks to address a technical challenge often see ways to extend their participation in joint initiatives with other teachers.

The findings in this study are noteworthy to determine that in teaching methodology teachers or educators should embrace the use of technology in teaching. Teachers and

educators must deploy efforts in investing time to implement new methods of teaching writing in class using online websites. Instead of individual assessment in writing, teachers should open more opportunities for the students to do online collaborative writing projects. Allowing the students to work as a team outside the classroom with the help of the technology will motivate students to be more independent and able to accept other views.

According to Zheng et al. (2018), while teachers' obligations and tasks that shift as the learner's autonomy grows, it is important to balance direct teaching with an acceptable degree of facilitation in the learning phase. As technology advances so do teachers. It is critical that teachers' professional development courses are taken into the light of the education system. With the technology at hand, it is easy for teachers to learn quicker and allows them to connect with other teachers and resources. However, according to Chen, Jang, & Chen (2015), the development map shows that teachers need a range of expertise and skills to learn. For example, techniques for self-oriented learning need to be created. They also need interaction and collaboration skills to be immersed in professional communities. Selecting or changing a multimedia platform requires a certain degree of technology literacy. More specifically, teachers need to be able to focus on, synthesise and assess their own experience, so that they are best able to adapt what they learn to teaching situations by instructional methods and intervention studies.

Technology literacy has the ability to touch children at all stages. It allows students the opportunity to learn and be innovative either on their own or as a group. Collaborative learning education has, by far, provided more resources for teachers to develop their knowledge and innovation in developing multimedia courses and pursuing innovative teaching methods. As traditional classrooms continue to be

converted into interactive classrooms, teachers can provide teaching through multi-faceted learning approaches. Technology should be at the forefront of personal development; this has, by far, contributed to many new developments.

According to Basham, Hall, Carter and Stahl (2016) claimed that despite the positive effects of technology intervention in the education sector, a significant obstacle associated with the introduction of new innovations or improvements in curriculum design is that, at a realistic level, the tracking and review of patterns or behaviours in education , in particular those motivated by digital learning and the accelerated development of technology can also be challenging. Different strategies and tools are required to enable teachers to focus on their experience in these different contexts, as well as to consider student thinking and learning habits beyond simple subject knowledge. (Kharrufa, Rix, Osadchiy, Preston & Olivier 2017).

5.9 Conclusion

The findings of this study showed that online collaborative learning can be as effective as face-to-face learning. In today's technological environment students in online programs are more comfortable in this learning atmosphere because of conveniences and flexibility it offers. The findings suggest that university students are willing to try new approaches in learning. It also identified that students have a positive attitude towards online collaborative writing assignments.

The perceptions towards Wikispaces Classroom website as a learning platform for collaborative writing clearly shows that the university students are very motivated therefore, this enhanced the students learning the outcome. Previous research focused more about the effects and efficacy of collaborative writing on its partners, rather than

looking at how collaborative writing activities could be further improved and strengthened with the aid of technology (Talib & Cheung, 2017).

The university study terms are only 14 weeks per-semester. Time is crucial for this study to ensure the outcome and the findings are substantive. The second limitation was the scope of the study. The scope of this study was limited to two topics. The topics were introduction and literature review. A small number of participants were another factor that contributed to the limitation of the study. The total numbers of participants for this study were 215 university students.

In order to obtain valuable data and meaningful results, a larger group of students and educators is needed. A more detailed of analysis of students' online writing collaboration, for example, the use of lexical and students' behaviours during collaborative task could reveal more on what students' can produce through online interaction in collaborative learning. Further research are required on the pedagogical aspects of collective writing where the co-construction of information takes place by interaction (Storch, 2013). This study is to understand the participants' attitude, interaction and perception towards online collaboration writing by adopting scaffolding and peer scaffolding theory, help to increase students' learning attitude and perception towards a positive outcome in learning.

Future research should explore more towards qualitative outlook on group interactions for peer feedback and the students' attitudes towards online collaboration authority in the product. It is in the hope of improving perceptions and satisfaction a much better learning environment can be developed. This will benefit both stakeholders and the system. Findings from this study could shed light on the investigation of the factors influencing students' perception and attitude towards

online collaboration and how their interaction could lead toward more independent learning. This supported by Lourdunathan and Menon (2017) suggested that successful strategy preparation would incorporate cooperative learning and peer reinforcement, so that students are motivated not only to explain themselves, but also to add further to the debate.

There is a significant need for more research that influences students' learning behaviour and outcomes. This will provide evidence for the effects of a new trend in online learning on its quality of learning. This study confirms that the students show a positive attitude towards online collaborative writing and presented good perceptions towards using Wikispaces Classroom as one of online learning platforms while online interactions, proofs to be effective compared to the traditional classroom. It gives space for those who feel inferior or less confidence asserting their opinion during face to face discussions.

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