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## Towards Digital Engagement – Exploring Academic Writing Conferencing and Collaborative Writing Using Google Docs

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### Abstract

Academic writing is a complex process for learners as they are required to transfer their thoughts into writing not only by using correct language but also formatting. When the world was struck by the Covid-19 pandemic, learning is migrated to online platforms. Instructors need to search for the best pedagogy to ensure the process of teaching and learning is not disrupted. Web 2.0 tools is perceived to be an ideal resource to assist instructors in teaching academic writing. Online writing tools like Google Docs are immediately integrated into the educational settings due to its vast values and potentials in assisting learners to learn within online environment. This paper presents a quantitative study investigating higher education students' perceptions toward collaborative writing using Google Docs as well as examining the manner online writing conference as a feedback tool can help to improve students' writing performance. The data is analysed using SPSS Version 24 with 49 students participated in this study. From the survey conducted, it is found that the learners reacted positively to the use of Google Docs not only to work collaboratively successfully but also the feedback they received in the Google Docs both from their peers and the instructor had helped them to improve their writing performance. This study implicated that Google Docs is a constructive resource as an alternative pedagogical tool that can facilitate learners' writing skills and digital engagement which is imperative as part of the effort to equip them with the 21<sup>st</sup> century skills.

**Keywords:** Academic Writing, Digital Engagement, Feedback Tool, Google Docs, Online Writing Conference

### Introduction

When the world is hit by Covid-19 pandemic, the education landscape is transformed instantly. During the disruption, learning is swiftly migrated to online and distance mode. This pandemic state is known as "emergency" and instructors have to react quickly by resorting to available ways such as E-learning systems and mobile learning applications (Almaiht al., 2020). The era of pandemic is a blessing in disguise when it radically transformsthe education settings by changing the process of teaching and learning culture in classrooms. It reasserts the need for further exploration on online learning and learning opportunities. The integration of

technology into an educational setting is based upon the rationale that it can support learning for the achievement of successful learning outcomes, facilitate 21<sup>st</sup> century skills development for work placement and develop learners to become lifelong learners and responsible digital citizens (Ng, 2015).

Traditionally, lessons were conducted face-to-face, however, now in the pandemic era, the process of teaching and learning is forced to be “non-face”, remote and synchronous via computer screens. Instructors have to search for ideal formulas which can prepare students to be competent in facing challenges that could obstruct their learning process (Moran, 2020). Despite the upsetting impact of the pandemic, however this health crisis has revealed that the education system is not necessarily disrupted and paralysed. With abundance of methodologies, frameworks and tools for instructors to recontextualised according to learning needs, the process of learning can still be facilitated. DeCapua (2016) and Custodio & O’Loughlin (2017) assert that disrupted education setting should be embraced because it is considered as “an asset for progress, improved performance and a positive mindset” (cited in Affouneh & Burgos, 2020, p. 13). The pandemic is not the only crisis that could affect the running of educational institutions as what can be seen in war-torn countries in which individuals are re-trained to be better equipped and prepared not only to survive the crisis but also its aftermath (Affouneh & Burgos, 2021).

Instructors are urged to embrace any educational change by adapting new materials, new theory, new policy and new teaching approaches (Fullan, 2001). Web 2.0 tools and Cloud technologies are some of the resources that are available for instructors to utilise in order to facilitate and support learning. Learning Academic writing is said to be a complex process and many students face difficulties to master the different sets of writing skills. Despite learning the language and the writing skills since young, many learners are still not able to perform well in essay writing. Constant guidance, feedback and monitoring are needed for the learners to cope with the demands of academic writing. During the pandemic, learners at higher education are learning remotely as the education institutions are forced to close. It is imperative for instructors to engage learners during the process of learning academic writing from a distance and yet feel closely connected not only to their instructors but also to their peers. Learners from this era are known to be digital natives who are already familiar with the use of technology being blended and integrated into their learning. To facilitate teaching and learning of academic writing, cloud technologies which support real time online collaboration and interaction between multiple learners in online spaces is perceived as a valuable alternative pedagogical tool (Stevenson & Hedberg, 2013).

Cloud technology is utilised in web 2.0 tools like Google Docs which supports learner-centred approach as well as allowing a space for learners to practice their writing skills and share ideas critically in a collaborative writing environment (Zhou et al., 2012; Said & Lee, 2014; Kwan & Yunus, 2015; Eppard & Reddy 2017; Yaacob & Yunus, 2019). Dekeyser & Watson (2006) claim that Google Docs is an outstanding and useful application to create collaborative documents online. Features of Google Docs such as light weight application and user-friendly tools which support multiple editors make it an efficient online editing system. Collaborative writing can be done online via Google Docs due its innovative features which allows learners to edit, modify or delete contents during the writing process in real time (Broin & Raftery 201; Perron & Sellers, 2011; Zhou et al., 2012; Stevenson & Hedberg, 2013; Suwantarathip & Wichadee 2014; Adrian, 2016) This “alternative environment” (Yunus & Salehi, 2012) makes acquiring and learning academic writing skills more meaningful for

learners are engaged to be independent and critical thinkers which brings to active learning in out-of-class setting.

This study was conducted to analyse the overall experience of learners in utilising cloud technology through the usage of Google Docs as a supporting pedagogical learning tool during a collaborative writing task in a writing course. The following are the objectives which navigate this study:

- a. To examine learners' perception towards collaborative writing task using Google Docs.
- b. To investigate the manner online writing conference as a feedback tool to improve learners' writing performance.

## Literature Review

### Collaborative Technology within Education Setting

Collaborative work from the perspective of second language learning is supported by cognitive and socio-cultural theoretical perspectives which emphasises on "meaningful social interactions" as well as an impactful learning method to promote learning in different subjects and social skills (Vygostky, 1978; Alsubaie & Ashuraida, 2017). Collaborative learning is a motivating approach which increases learners' "sense of responsibility", "increased confidence" and "interaction skills" as learners develop "new ways of thinking" (Alsubaie & Ashuraida, 2017, p.12) as they rationalise and weigh explanation, arguments and understanding viewpoints from their peers (Boud et al., 2014). Banarjee (2000) argued that in a collaborative learning process, learners are involved in several stages: formulation of ideas, test of assumptions, clarification of ideas, arrival at a conclusion and assimilation of ideas from others. Collaborative learning provides a space for learners to be a "dynamic contributor" by helping the group "to create a product that reflects a wide range of perspective, complete and comprehensive" (p. 1).

This collaborative pedagogy is translated into web 2.0 tools such as asynchronous discussion board, blog and e-mail which helps learners to have a three-way interaction: peers, instructor and content. Apart from providing a motivating learning setting which appeals to the digital natives, the merits of collaborative technology are endless which include unlimited and mobile access that facilitate "thinking, reflection and discussion" as well as eliminating learning obstacles like "deficiency of communication skills, cultural limitation or shyness" (Oblinger, 2005; Zorko, 2009; Arnold & Ducate, 2006; Ishtaiwa & Abulibdeh, 2012; Blankenship & Margella, 2014; Ishtaiwa & Aburezeq, 2015).

Learners' writing skills can be effectively facilitated and taught through collaborative writing (Giroud, 1999). Two or more writers collaborate closely to produce a joint-production written text which learners need to interact closely as they are involved in the processes such as "testing hypotheses, receiving and noticing feedback, and focusing on accuracy" as well as sharing responsibility (Haring-Smith, 1994; Storch, 2011, p. 276). Online collaborative writing has long emerged with the rise of technological learning tools (Macdonald, 2006), however, the need for it has become more urgent when learners are not able to meet during the pandemic. Collaborative writing involves tasks and activities such as pre-draft discussion, writing arguments and post-draft document produced by two or more writers (Dillon, 1993). Collaborative writing is a dynamic process that can be carried out and redefined in various forms and technology integration (Yang, 2010; Alsubaie1 & Ashuraidah, 2017). When writing

collaboratively via online, learners can participate in the task despite being in different time, space and location as well as playing the role as a reviewer when reviewing others' writing (Alexander 2006; Parker & Chao 2007). On the other hand, instructors may facilitate the writing process through a panopticon lens, thus able to give out comments in greater details (Nykopp et.al., 2018).

Multiple research have been conducted on the use of Google Docs within the educational setting. Perrova-Millo (2017) experimented with Google Docs for an engineering program in which the study revealed that Google Docs is a useful tool to inculcate their skills to use technology in managing their work products which supports knowledge generation and keeping records of their progress and allow others to access their analysis and decisions. In Afdaliah et al (2019) quasi-experimental design showed that Google Docs not only has significantly improved learners' writing skills, it also has improved their interest into learning writing skills through the embedded technology. Arora (2019) conducted a unique research in which she has used a management school as a case study to solve issue pertaining to class attendance by utilising different Google tools such as Google Docs and Google Drive as the cloud to store the massive records. Woodrich & Yan (2017) examine how Google Docs can be utilised as a motivating learning tool among students of different language linguistically diverse background as they are engaged in anonymous collaborative writing. They found that students of varying language fluencies participated more equally when they were able to remain anonymous as the learners found Google Docs to be a beneficial learning tool. In another study by Olese (2020), he has conceptualised Google Docs as a hybrid learning space and he examined how it is used and affects group work in classrooms. The research discovered that hybrid Google Docs plays dual role as a collaborative and cooperative space which affords "flexible non-leader positions" to be more inclusive in contributing their thoughts to the writing process. Olese ends his study by coining the term "cooperative collaboration" to describe the group dynamics in the Google Docs hybrid space. Fauziah & Sudarmaji (2020) study was to determine if the use of peer editing technique that is featured in Google Docs is effective to teach writing skills and they found this technique does contribute to the learners' overall writing performance after receiving feedback from their peers.

### **Theoretical Perspectives**

This study is framed based on several theoretical perspectives, first, the process approach to writing. This approach perceives writing as a process and not emphasising solely on the end-product. In Hyland (2003) and Kalan (2015), they urge for instructors to guide learners in the writing process from the planning stage to editing stage by providing feedback and writing activities.

In a writing class, learners are engaged in several writing steps before arriving at the final product. They need to set goals, generate ideas, organise ideas, translating the ideas into action, and reviewing their writing texts. Learners are to work collaboratively with the instructor who plays the role as a facilitator by creating a supporting and non-threatening environment. Instructions pertaining to the writing task is provided through mini lessons and writing conferences (Graham & Sandmel, 2011). The process-approach to writing is executed in stages. The first stage which is the stage of planning, drafting and revising, learners are involved in cognitive activities which would determine the quality of the overall writing product (van den Bergh & Rijlaarsdam, 1996). In the second stage, learners received instructions and feedback pertaining to the writing task via mini lessons and writing conferences which would lead to

improved quality of writing. This stage is crucial as instructors can address the “instructional needs” of the learners in order to complete the writing task (Graham & Sandmel, 2011). In the final stage, instructors need to create a motivating learning setting in order “to facilitate the value that students place on specific academic tasks (Wigfield, 1994).

Additionally, this study is also framed by framework derived from The Community of Inquiry (COI) Model of Online Learning (Garrison, Anderson & Archer, 2000) which places emphasis on “social presence, teaching presence, and cognitive presence as essential elements to facilitate successful educational experiences in online distance learning environments” (Bektashi, 2018). COI assumes that for effective online learning to occur, especially higher order learning, requires the development of community. It is a dynamic model which consists of core elements for “the development of community and the pursuit of inquiry, in any educational environment.” (Swan, Garrison & Richardson, 2009). It consists of three core elements; cognitive, social and teaching presence which are viewed as multidimensional and interdependent. COI model of online learning is established from constructivist approaches in which, in an online learning environment, students are given the autonomy to actively construct and confirm meaning (Garrison, et.al., 1999; Bektashi, 2018). It is ascertained that meaningful learning occurs when the task design gives focus onto the learners and they are learning by making mistakes and self-inquiry. Meanings are formed and new knowledge is created when learners can make the connection between the new content and their existing knowledge. Advances in technology have provided tools that support students, as they explore and inquire. To support a student-led education, the role of the educator needs to be reimagined; instead of recording information, learners interpret new knowledge by relating it to existing concepts (Patterson, 2018).

## **Methodology**

### **Participants and Setting**

The respondents are first year students from the programme of Islamic Security and Defence (ZP63), Universiti Pertahanan Nasional Malaysia (UPNM). There are 36 male and 13 female students with the range of age between 18-23 years old. All 49 of them are required to take English for Academic Writing which is one of the University’s compulsory subjects. They enrolled into the university during Academic Semester I 2020/2021. However, classes were conducted online as the university was subjected to the Recovery Movement Control Order as instructed by the National Security Council, followed by Conditional Movement Control Order and reinforcement of Movement Control Order in January 2021.

### **Learning Procedure and Data Collection**

As part of the course syllabus, the learners were required to work collaboratively in completing a term paper assignment based on topics of their choice. To ensure continuous and consistent engagement to the writing task, the learners are divided into groups of 3 members selected at random and each group is assigned with a Google Docs that was set up by the instructor. As the learners had never used Google Docs as a writing tool, the learners were required to watch an online tutorial via You Tube on how to use and navigate the different tools in Google Docs. The Term Paper assignment is divided into several sections and each completed section carried different marks which accumulated to 20 marks:

**Table 1: Writing Task and Marks Allocation**

<b>Task</b>	<b>Marks</b>
Clustering Board	2 marks
Essay Outline (Thesis statement, Supporting Paragraphs, Conclusion)	4 marks
Essay Draft 1	4 marks
Essay Draft II (Revising and Editing)	4 marks
Final Draft	4 marks
References (APA style)	2 marks
<b>TOTAL</b>	<b>20 MARKS</b>

The duration for each group to complete each section of the Term Paper is between 7- 10 days. On each due date, the instructor would visit each group's Google Docs to check the learners' writing product. Instructors would leave comments and feedback to improve the content as well as the performance of their writing. Learners were expected to rectify and revisetheir writing drafts based on the comments received from the instructor in the Google Docs. A questionnaire which was adapted from Alsubaie & Ashuraidah (2017) and was distributed to all 49 students via Microsoft Forms to examine their overall experience in using Google Docs in a collaborative writing task. The findings from the survey were analysed descriptively using SPSS version 24.

### **Research Findings**

According to Table 2, the overall mean score indicated students' positive perception towards collaborative writing activity using Google Docs as a learning tool (Mean = 4.1). The two highest scores of the students' perceptions fell on statements no. 2 and 3, respectively. That is, the students had very positive perception towards the effectiveness of using Google Docs in a group work (Mean = 4.26). Moreover, they expressed positive perception towards Google Docs as a tool which is easier to use than Ms Word (Mean = 4.26). However, the lowest mean score of the questionnaire was statement no.5 showing that the use of Google Docs only moderately motivates students to collaborate with their peers in the group (Mean = 4.10).

**Table 2:** Means and standard deviations of student perceptions toward Google Docs as a learning tool (N=49).

	Statement	Mean	S.D
1.	It was easy to use the Google Docs tool for a collaborative writing assignment.	4.1837	.90539
2.	It was effective to use the Google Docs tool in group work	4.2653	.86061
3.	Google Docs tool was easier to use than traditional tools such as MS Word.	4.2653	.86061
4.	The quality of collaboration in the group increased with the use of GoogleDocs tool	4.1837	.78192
5.	Google Docs tool motivated me to collaborate with the students in my group.	4.1020	.98414
6.	It was convenient for me to edit and comment others' contributions to our Term Paper via Google Docs.	4.1224	.80707
7.	I would like to use Google Docs for more assignments in the future.	4.1224	1.03345
	<b>Total</b>	<b>4.1</b>	<b>2.5</b>

Table 3 shows the overall mean score indicated students' positive perception towards collaborative writing activity using Google Docs as a feedback tool (Mean = 4.2). The two highest scores of the students' perceptions fell on statements no. 2 and 3, respectively. That is, the students had very positive perception lecturer's feedback in the Google Docs which motivated the team to contribute more (Mean = 4.4). Moreover, they expressed positive perception that upon receiving feedback from the instructor, they felt that they can contribute better to the group's collaborative writing task (Mean = 4.3). However, the lowest mean score of the questionnaire was statement no.1 showing that the students only feel moderately successful on the Term Paper assignment after using of Google Docs (Mean = 4.16).

**Table 3:** Means and standard deviations of student perceptions toward Google Docs as a feedback tool (N=49).

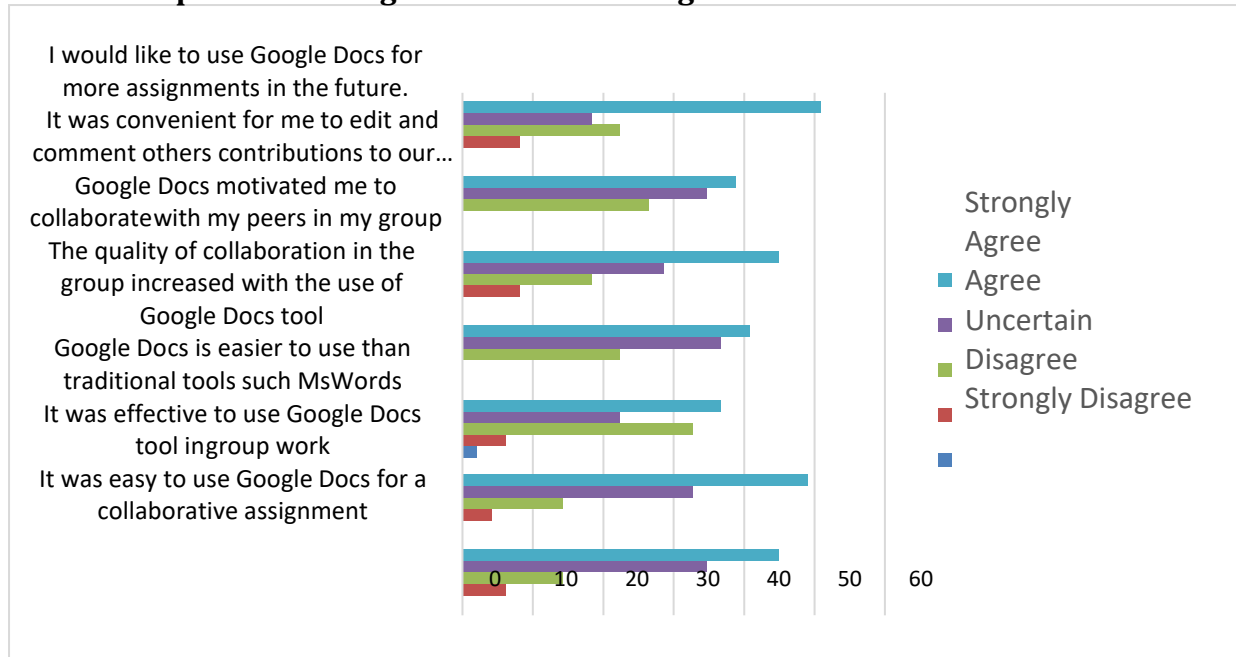
	Statement	Mean	S.D
1.	I felt successful on the Term Paper assignment after using Google Docs.	4.1633	.68760
2.	My lecturers' feedback motivated everyone in my team to contribute more when using Google Docs.	4.4082	.83960
3.	After receiving feedback from my lecturer, I had something to contribute to my team on term paper assignment.	4.3469	.72316
	<b>Total</b>	<b>4.2</b>	<b>1.5</b>



Figure 1 shows the results of the survey on learners' responses to using Google Docs as a learning tool. To ascertain the answer, a seven-question Likert scale survey, with possible responses ranging from 1 - Strongly Disagree to 5 - Strongly Agree. The results are expressed here in Figure 1. Higher scores signal greater overall learners' agreement with each statement.

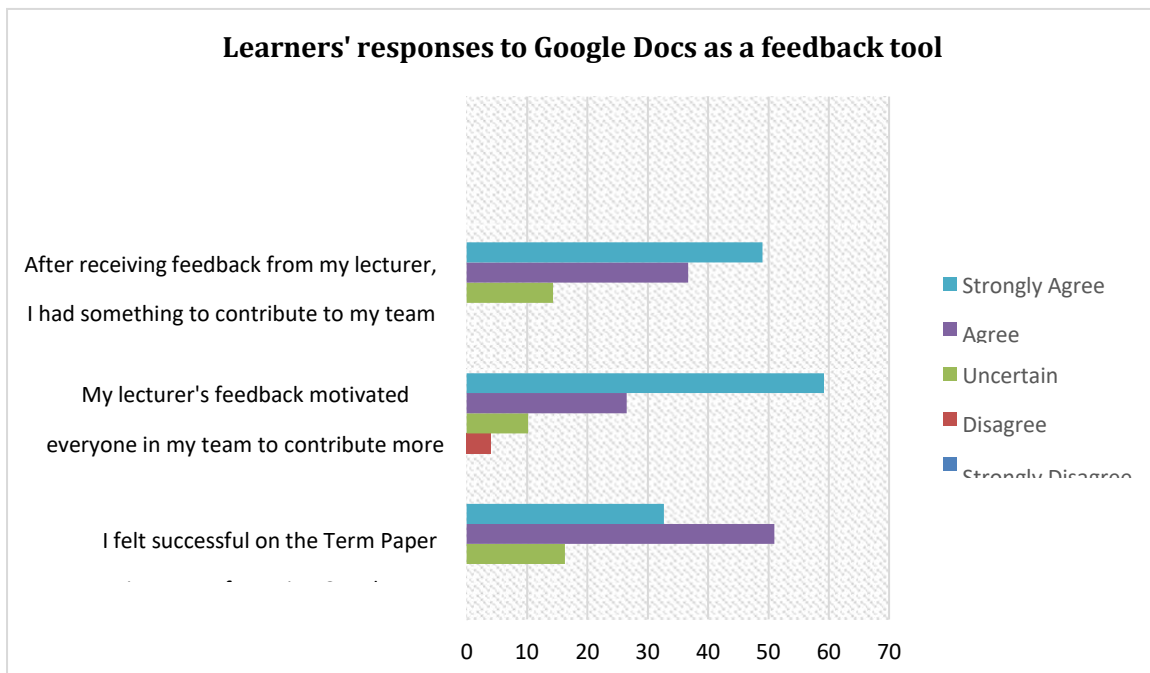
**Figure 1:** Percentages of learners' responses to Google Docs as a learning tool

### Learners' responses to Google Docs as a learning tool



Learners' responses were positive for item 1, with 59% from them agreed that they felt Google Docs is easy to use for a collaborative writing task. It is clear that being digital natives really help the learners to cope in online learning with readily available interactive tools. For item 2, almost 82% agree that Google Docs is an effective pedagogical writing tool to be used for a group task. In item 3, 59% from the participants shows that Google Docs is much easier to use than MsWord. 77.5% from the respondents agree that Google Docs motivate them to work along their peers while 73% from the respondents Google Docs gave them the convenience to share comments about each other's writing. Finally, 69.4% from the respondents welcome the use of Google Docs for their future assignment which indicated that they have benefit from the collaborative task as it eased up the process of working in groups.

Figure 2 shows the results of the survey on learners' responses to using Google Docs as a feedback tool. To ascertain the answer, a seven-question Likert scale survey, with possible responses ranging from 1 - Strongly Disagree to 5 - Strongly Agree. The results are expressed here in Figure 2. Higher scores signal greater overall learners' agreement with each statement.

**Figure 2:** Percentages of learners' responses to Google Docs as a feedback tool

Learners' responses were positive for item 1, with 83.7% from them agreed that they felt successful after completing the collaborative writing task via Google Docs. This indicates that Google Docs not only functions to ease the process of writing but also as a motivating tool for them to work better. For item 2, almost 86% agree that feedback received from the instructor was motivating and encouraged them to contribute more to the group task. In item 3, 86% from the participants showed that they felt successful after completing their Term paper based on the feedback received from the instructor.

In the open-ended section of the survey, learners were asked to describe the manner Google Docs has helped to improve their writing performance and whether the usage of Google Docs for a collaborative writing task has strengthened their engagement to educational technology. Table 3 has illustrated the findings from the open-ended question which reflect the positive responses from the respondents.

**Table 3:** The impact of Google Docs on learners' writing performance and technological engagement (N=49).

Themes	Sub-Themes	Sample Comments
1 <i>Easy to collaborate with peers to produce a term paper.</i>	1.1 Easier to work with friends	<i>"Yes, because it makes it easier to work with friends."</i>
	1.2 Prevent inactive group members.	<i>"Google Docs prevent free riders in group works."</i>
	1.3 Receive feedback from peers	<i>"It works for me. By writing my essay using Google Docs I can read my friends' opinion before contributing to the group essay."</i>
2 <i>Monitoring and Feedback from Instructors help to improve writing performance</i>	2.1 Monitoring and sharing ideas	<i>"I can improve my writing skills because the lecturer is monitoring us."</i>
	2.2 Lecturer leaves comments for improvement	<i>"We can also receive feedback from our group members."</i>
	2.3 Close monitoring by lecturer	<i>"We can progress our essay based on the comments received from our lecturer in the Docs."</i>
3 <i>User-friendly tools in Google Docs make writing an ease and learners feel engaged with technology</i>	3.1 Helpful and effective tools	<i>"Very helpful tool."</i>
	3.2 Easy to access	<i>"Easy to use tools in the Google Docs."</i>
	3.3 Accessible from any location with Internet connection	<i>"Accessible to use at anywhere and anytime."</i>
4 <i>Learners are guided throughout the writing process and help them to produce a quality writing</i>	4.1 Reflect classroom learning	<i>"I learn to use new technology for my study." "Not feeling lost when doing the task."</i>
	4.2 Not getting lost in the task	<i>"Writing skills can be managed and it is encouraging to continue writing."</i>
	4.3 Managing and improving writing	<i>"Writing skills are significantly improved."</i>

### Discussion of Findings

This study was undertaken to assess learners' perceptions toward Google Docs as a learning and feedback tool as well as to determine if the usage of Google Docs has helped to engage them in the usage of education technology during remote learning. The results from this study have shown that Google Docs indeed has a positive impact as a learning tool in out-of-class setting such as altering the way learners interacted about the writing task. Google Docs provide a platform for learners to communicate and to share ideas critically with their peers in a group writing task (Zhou et.al., 2012). Due to the positive experience of using Google Docs, majority of the respondents found it as a helpful learning and feedback tools and they are looking forward to using Google Docs for their future academic tasks. The constructive findings are related to the respondents' positive outlook towards collaborative writing in remote setting using GoogleDocs (M= 4.1). This indicates the flexibility and accessibility of Google Docs in facilitating easier collaboration as long as they are connected to the Internet (Oishi, 2007). Most respondents perceived that it is important for them to be able to share ideas meaningfully with their peers whilst completing the assigned writing task. This finding is consistent with previous studies by Brodahl, Hadjerrouit, & Hansen, 2011; Zhou, Simpson, & Domizi, 2012). When learners and instructors are forced to be physically distanced, online learning is the remedy to ensure uninterrupted teaching and learning process. The flexibility and effectiveness of GoogleDocs makes it easy to administer as it is easy for instructor to set up online writing groups with "less resource and time" (Mukhtar et.al., 2020) as well as training learners to be self-directed and autonomous.

The findings have also illustrated on the importance of feedback to learners with more than 80% agreement. Feedback is imperative in providing guidance and reassurance that they are going into the right track. Apart from that, constructive feedback from instructor may motivate and increase learners' confidence not only to edit their work but also to edit work of their peers. This leads to learners' sense of accomplishment and feeling of success for being able to complete the task after receiving guidance from both their peers and the instructor (Swain & Lapkin, 1998). Online asynchronous writing conferencing promotes positive relationship between instructors and learners (Horne, 2012). The process of conferencing through the comments noted by the instructors in the Google Docs enables learners to self-reflect on the quality of their writing, thus allowing them to revise their writing and develop as a competent writer. The usefulness of Google Docs as perceived by the respondents mirror the theoretical perspective of COI which promotes multidimensional aspects of social, teaching and cognitive presence in an online setting. As students are engaged in "coordination of task related activities" like planning and evaluation of ideas and "coordination of social activities" in which learners are involved in active discussion of "collaborative strategies" with their peers (Janssen et.al., 2012), this creates a sense of social and cognitive presence. Despite not having a physical shared space, however, the online learning setting within Google Docs affectively impact the learners as they feel connected to their peers and instructor through online-mediated communication.

The implications from the findings of this study support that Google Docs is a useful pedagogical tool that makes online learning environment possible due to its accessibility and familiarity to learners with user-friendly interface which allows special characters, tables, images and hyperlinks for learners to utilise in their writing task (Abrams, 2019). During the time of pandemic, learners have to be adept in utilising technology as learning takes place in

various and remote settings. With the use of Google Docs to achieve learning outcomes, learners are engaged in a “democratic and relaxing atmosphere” where they can rationalise their errors, accept comments from others and revise their work (Suwantarathip & Wichadee, 2014, p. 155).

### Conclusion

The use of Google Docs to facilitate online collaborative writing addresses several issues pertaining to the integration of technology within a classroom setting. This study has proven the positive impact of online learning tool within out-of-class setting in helping learners to acquire academic writing skills. With the pandemic still lurking at present, education stakeholders, instructors and learners need to better prepare and equip themselves to face the changes in the education landscape. Learners from diverse background and learning needs have to be addressed by seeking for new technologies and alternative teaching approaches to create effective learning activities which could sustain their interest within an online environment. The use of Google Docs can be extended as an innovative tool to carry out seamless and ubiquitous assessments. Summative or exam-oriented assessment perhaps may lose its relevance in today's context for the emphasis is now placed on formative assessment which is more efficient from the perspective of life-long learning. With the affordances of Web 2.0 technologies like Google Docs that works based on Cloud technology, it supports social learning through the engagement of collaborative learning activities and diminish traditional boundaries between learners and instructors by transforming the roles of instructors as a facilitator of knowledge rather than being the sole source of expertise in online classroom settings. To face the challenges of 21<sup>st</sup> century, instructors need to re-train and re-educate themselves by examining their courses and selecting any relevant technological learning tools which are abundantly available since the beginning of the era of pandemic that may facilitate and assist learners to achieve the designated learning outcomes.

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