

PAPER

University Students' Perceptions of Google Tools in Learning English Courses Online

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ABSTRACT

The disruptions caused by the COVID-19 pandemic stimulated the utility of the technological tools for online language learning at the tertiary level in Vietnam. Many universities chose Google digital tools as a technological solution for online instruction. However, there is still a scarcity of studies on university students' perceptions of using Google tools in the context of online English learning. This study aims to explore university students' perceptions of the efficacy of using Google tools (namely, Google Classroom, Google Forms, Google Meet, and Google Sites) as a combined technological solution for online English learning in the last phase of the pandemic at a university in northern Vietnam. The research was carried out in the academic year 2021–2022, with 128 non-English majors taking General English courses online. A Likert-scale questionnaire created by Google Forms was distributed to gather feedback from the students, and semi-structured interviews were conducted with eleven students to gain more in-depth data. The results overall demonstrated that the students favorably perceived the applied Google tools as effective tools to support online English learning. It was also found that females had higher perceptions than males regarding the ease of the tools. Furthermore, first-year students agreed more than second-year students on the effectiveness of the tools in increasing engagement in learning.

KEYWORDS

Google tools, online English learning, technological solution, university students' perceptions

1 INTRODUCTION

Since the discovery of the first case of the novel coronavirus of the COVID-19 pandemic in Vietnam at the end of January 2020, the government has firmly decided to temporarily close educational institutions. As a responsive strategy, schools and universities have implemented online learning for official courses and curriculums. Traditional face-to-face language instruction at the tertiary level was affected, and an emergency switch to online teaching and learning mode was instituted [1], [2]. Therefore, online language learning became a dominant alternative replacing the

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traditional learning [3]. Universities sought emerging technologies that supported online language learning in order to deal with the disruptions caused by the pandemic. For this course, technological tools played an integral part in assisting educators and learners to maintain the teaching and learning schedule and succeed in achieving the educational goals [4].

Google is the dominant provider of digital cloud-based tools since it is the most widely used platform for public and educational purposes [5]. It is commonly agreed that Google products possess beneficial features for online education including promotion of communication, information sharing, effectiveness, and teamwork [6]; creating fun in learning [7]; ease, simplicity, flexibility, creativity, and collaboration [8–10]. Google tools are essential for meeting the challenges of twenty-first-century educational goals, and a fundamental shift must be directed toward the tools' applicability in teaching, research, learning, and management [11].

During the disruptive time caused by the pandemic, Google tools emerged as effective in supporting online learning. Numerous studies on students' perceptions of using various Google tools in online English learning were found in the literature. The findings of these studies generally revealed that students highly welcomed the opportunity to make use of the tools in class, and that they strongly perceived the efficacy of Google digital tools in online learning.

The effectiveness of using technology in language learning has long been acknowledged to be evident in different aspects. Technology integration has been shown to improve motivation, autonomous learning, engagement, and learning performance [12], [13]. And many studies on students' perceptions of technology use in language learning show that using technological tools to support learning is positively accepted among students [14], [15]. However, there are still debates of effectiveness of online learning technology in terms of students' perceptions [3].

Researching student perceptions on the use of technologies in online learning is crucial as it helps gather insights on how effective the technologies are in enhancing the overall learning experiences of students and increase the student retention [3]. Also, by understanding the students' perceptions on the use of technology, teachers and educators can design courses that are more effective and help make improvements to the teaching [16].

This study aims to find out what university students think about using a combination of Google tools (specifically, Google Classroom, Google Forms, Google Meet, and Google Sites) as a technological solution for online general English courses. During the last period of the COVID-19 pandemic, the application of the tools served the teaching and learning needs of 128 first- and second-year students at a university in northern Vietnam during the academic year 2021–2022. The study investigates the overall perceptions of students regarding the Google tools used and identifies differences in perceptions between male and female students, first-year students with no experience using the Google tools, and second-year students with some experience using the tools in previous courses. Theoretically, it is anticipated that the results of this study will contribute to the literature on university students' perceptions of technology in online language learning by providing evidence from the context of online English learning at the tertiary level in Vietnam. The COVID-19 pandemic forced many schools and universities to shift to online learning, which posed challenges for students and teachers alike. Understanding students' perceptions on the use of the Google tool in this new environment can help educators adapt and improve their teaching approaches. Hence, practically, the findings of the study provided students and educators with an expanded selection of digital tools for online teaching and learning, including Google tools.

2 LITERATURE REVIEW

2.1 Effectiveness of using technology in language learning

The effectiveness of using technology in language learning has been widely acknowledged to be evident in different aspects. The use of technology in the learning process is approved to result in enhancement of motivation, autonomous learning, engagement, and learning performance.

It is noticed that increase in motivation is the most agreed effect of implementing technology in the process of learning a language [12], [17–22]. The scholars all share that technology itself carries the motivational elements that help to stimulate language learners. Arndt [18] states that thanks to the beneficial features of technology, the learning can be diversified, and students can be motivated to pursue the learning activities. Van et al. [12] finds that using technology in English learning students brings students joy in learning. Cutter [22] stresses newly developed technologies afford students a range of chances for learning which leads to motivation enhancement.

Academics also indicate that technology applications in language learning can lead to improvement of learning performance [20], [23]. Ahmadi [23] notices that educational technology tools stimulate language learning results. Ilter [20] states that the use of technological devices and tools in English training may increase student motivation and yield more profitable outcomes. However, the scholar stresses that each course must be founded on strong pedagogical concepts and competent technical execution. Reinforcement of language learning skills is also accentuated by many authors [12], [13], [17], [19], [24]. Richards [19] specifies that the use of technology allows language learner expose to more learning resources. As a result, their language learning skills can be boosted. By applying technology in the English language teaching, Van et al. [12] finds that improvement among the students is witnessed in all four learning skills: listening, speaking, reading, and writing.

Many academics state that autonomous learning is evident in the context of language learning with the use of technology [13], [17], [19], [25]. Reinders [25] argues that technology can also be used to explicitly support the growth of learner autonomy. Both Alsulami [17] and Pradana et al. [13] asserts that the utilization of cloud-based resources helps students become aware of the learning process and take better control of their learning.

Beside autonomy enhancement and learning outcome improvement, engagement is commonly found effects of applying technology in language learning [13], [18], [19], [23]. According to Arndt [18], technology helps to create more interactive and engaging activities than conventional learning. And by that way, learners naturally get involved in the learning process. Ahmadi [23] believes that educational technology owns its potential to boost students' active engagement because of unrestricted access to resources and chances for working in teams.

2.2 Differences in perceptions of technologies for learning regarding gender and prior experience

In a number of studies on students' perceptions of using technologies for learning, gender differences were discovered. Male students had more positive perceptions than female students regarding the use of a digital library [26]. Males' perceptions of usefulness, ease of use, and behavioral intention to use e-learning were all higher

than females' [27]. Male students were also found to have a better understanding of the benefits of educational technologies [28]. Male students have more confidence in using technology for learning than do female students [29]. However, the findings in [30] and [31] appeared to counter previous findings. In terms of frequency of computer use, perceived ICT skills, and attitudes toward computers, females had higher perceptions [30]. In comparison to males, females reported higher levels of perceptions of using mobile-assisted tools such as Clasdojo, Kahoot!, and Socrative in learning English [31]. Other studies found that there were no significant gender differences in perceptions of e-learning use [32], [33] and online technologies [34]. Male and female students showed the same degree of perspective in their recognition of the online learning platform [35], in using mobile maps as navigation aids [36] and mobile-assisted learning devices [31], and in using Google Classroom in different English courses [37].

Many studies have also revealed differences in students' perceptions of utilizing technologies for learning based on their prior experiences. Students with prior online learning experience were found to be more satisfied and to have had a positive learning experience [38]. Likewise, Shen et al. [39] found that students who participated in more distance education courses had a higher likelihood of possessing greater online learning self-efficacy. Students with more computer and Internet experience had significantly higher scores on all subscales of the online technology self-efficacy scale, according to the findings of [34]'s study. Similarly, students with prior experience with Google Classroom had a more positive perception of its use than first-time users [37].

2.3 Google Workspace for Education tools

Google Workspace for Education (previously referred to as G Suite for Education or Google Apps for Education) was introduced in 2021 in order to continue the mission of helping anyone in the world learn anything and anywhere in the world [40]. There are four editions: Fundamentals, Standard, Teaching and Learning Upgrade, and Education Plus including core tools such as Classroom, Forms, Meet, Sites, Drive, Gmail, Calendar, Docs, Sheets, and Slides. The products are served to facilitate collaboration, stimulate productivity, simplify classroom procedures, diversify teaching and learning activities, improve educational experience, adapt to the evolving demands of educators and learners, and guarantee a risk-free learning environment [41].

As Yeskel [28] states, there is an increase in usage of Google Workspace for Education among educators and learners worldwide for the need of teaching and learning online with safe, secure, collaborative, optional, flexible and effective tools. As of February 2021, more than 170 million educators and learners in the world use Google Workspace for Education [40].

2.4 Previous studies on students' perceptions of Google tools in learning English online

Numerous studies on students' perceptions of Google tools in English learning online have been identified, which were conducted either with separate Google applications such as Google Classroom [35], [37], [42]; Google Forms [43], [44]; Google Meet [45]; Google Sites [46], [47]; Google Docs [48], [49], and Google Translate [5], [50],

or with a combination of several tools such as two tools of Google Docs and Google Classroom [51], or four tools of Google Classroom, Google Meet, Google Docs, and Google Forms [52]. Overall, the findings in the studies revealed that students positively perceived the tools as effective aids in the learning process.

Studies on students' perceptions of Google Classroom showed that most students agreed that Google Classroom was easy to use and performs well because it lets students save and submit teacher-provided files and materials [42]. Students liked using Google Classroom to learn English, and male and female students had the same perceptions [37]. Mixed results were also found in [35] that students had a positive perception of Google Classroom as an online learning medium with a mean score of 2.64, but negative perceptions in its use in English skills lessons with a mean score of 2.47 and low level of motivation. As for Google Forms, it was found that students liked using the tool for listening comprehension tests [44], and students were positive about using it for online assessments [43]. Findings in [45] on students' perception of Google Meet revealed that students were content, safe, self-assured, brave, and confident psychologically, and that there were no barriers during the Google Meet video conferencing during the English-speaking class. Studies [46], [47] on students' perceptions of Google Sites shared similar results. Students perceived Google Sites as a quite helpful, interesting, interactive, and easy tool to use [46], and learning with Google Sites was efficient, fun, and motivating [47]. Regarding Google Docs, most students who wrote using Google Docs felt that it helped them improve their teamwork and discussion abilities [48]. In addition, the students felt that it was simpler to communicate and interact with the lecturer than in a traditional classroom setting. The results in [49] pointed out that students recognized Google Docs as an effective online cloud-based collaborative writing tool for their learning, and they appreciated the platform's accessibility and interactivity, as well as their experience exchanging online feedback on their writings via Google Docs. Both studies [5] and [50] examined how students perceived Google Translate and found identical results. It was found that students were generally positive towards the use of Google Translate in their language learning, while being aware of the limitations of Google Translate in translating longer sentences, paragraphs, and texts [5] and useful features such as multilanguage translation, time savings, ease of use, and improving pronunciation [50].

In two different contexts, Khalil [51] and Chiablaem [52] investigated how students felt about a combination of Google tools. In Palestine, Khalil [51] combined Google Classroom and Google Docs to teach English as a second language in flipped mode. Chiablaem [52] used Google Classroom, Google Meet, Google Docs, and Google Forms in a COVID-19 online English class for Thai students. Students thought they made learning more collaborative [51], and the majority of those who participated preferred to use the tools when learning online [51], [52]. The findings also revealed that the tools helped all of the students improve their English vocabulary, grammar, pronunciation, ability to learn English, and digital literacy [52].

3 METHODOLOGY

3.1 Context and participants

The university where the research was conducted is a university in northern Vietnam. English is a compulsory subject for all university students regardless of major. For the first and second academic years, there are three consecutive General

English courses: General English 1 (GE1), General English 2 (GE2), and General English 3 (GE3). The courses are scheduled on a weekly basis and last with a semester of 15 weeks. GE1 and GE2 are in the first year, GE3 is in the first semester of the second academic year. Four computer laboratories with 40 desktop computers and internet access are available to support English teaching and learning at the university. Oxford University Press's Smart Choice 1, 2, and 3 (third edition) course books were used for the courses.

The university started using Google Workspace for Education Fundamentals Edition 2018. Teachers, students, and staff across the institution were given a Google account to serve the teaching and learning, communication, and management. During the first semester of the academic year 2021–2022, the COVID-19 pandemic in northern Vietnam was still having an impact.

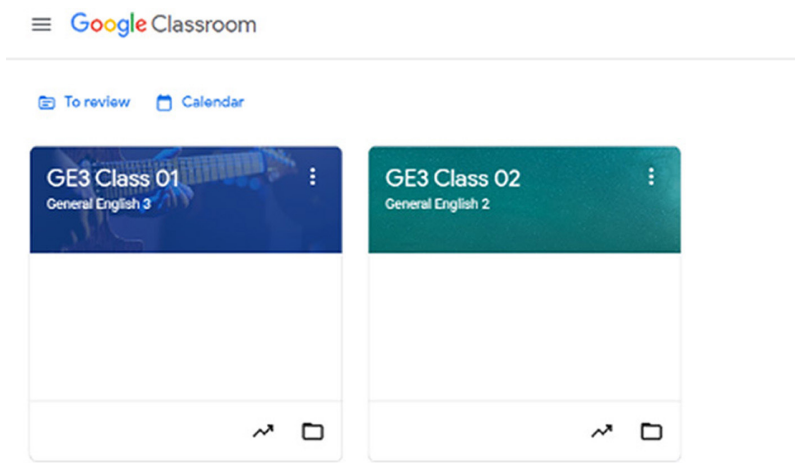


Fig. 1. Classes in Google Classrooms



Fig. 2. Tasks using Google Forms

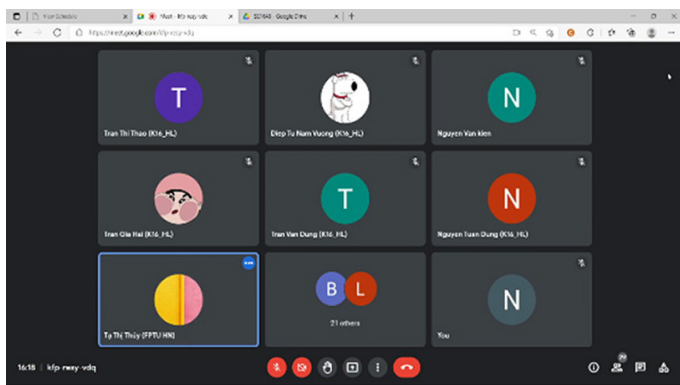


Fig. 3. Meetings in Google Meet

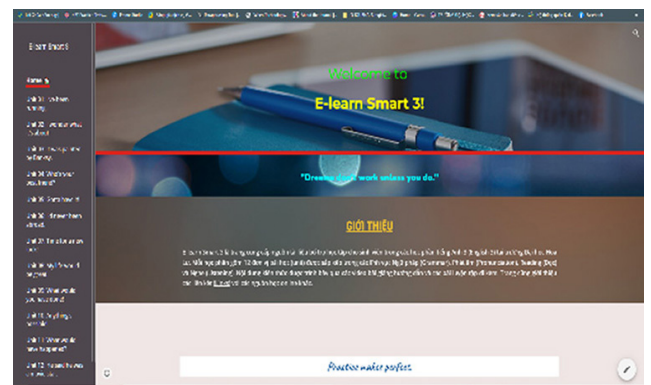


Fig. 4. GE3 page using Google Sites

Google Classroom, Google Forms, Google Meet, and Google Sites provided in the registered Google Workspace for Education Fundamentals Edition were employed by teachers and students at the university for online teaching and learning General English courses. Google Classroom, a learning management system, was used to deliver and schedule teaching and learning materials. Teachers created General English classes in Google Classroom (as in Figure 1), and students were invited in the classes with their given accounts. Assignments, quizzes, practices, and learning tasks were created using Google Forms (as in Figure 2). Google Meet was used as a

video conferencing platform for online education and instruction (as in Figure 3). The main contents of the students' textbooks as well as additional practice materials were digitized and included on a website created with Google Sites (as in Figure 4).

Participants in this study included 128 university students in General English courses in the first semester of their second academic year, in which there are 74 males and 54 females, 63 first year students and 65 second year students. They come from different departments. They pursue degrees in different majors including primary teacher education, accounting, and tourism. The first-year students learned GE1 in the first semester of the first academic year 2021–2022. The second-year students who completed GE1 and GE2 in the year before continued learning English online in GE3 in the first semester of the second academic year. At the time when the study was carried out, the first-year students had no prior experience of learning English online with the Google tools, and the second-year students had more experience of using the Google tool in online English learning in the previous English courses GE1 and GE2.

3.2 Research question

The paper will address the following research questions:

1. What are the students' overall perceptions of the Google tools used in online English learning?
2. Is there a significant difference in perceptions between male and female students in online English learning?
3. Is there a significant difference in perceptions between second year students having prior experience in using the Google tools in online English learning and first year students having no experience?

3.3 Data collection tools and analysis

To serve the purpose of collecting data for this exploratory mixed-method study, two tools were employed: a questionnaire and semi-structured interviews.

The questionnaire consists of seven Likert-scaled items that were created using Google Forms, described as 1 for "Strongly Disagree" and 5 for "Strongly Agree". The questionnaire was designed and based on the usability of the Google tools for online learning and the effectiveness of using technology in language learning which included ease (item 1), user-friendliness (item 2), simplicity (item 3), motivation enhancement (item 4), autonomy development (item 5), learning performance development (item 6), and increase in engagement (item 7). The questionnaire was delivered online to the participants at the end of the academic year 2021–2022.

Semi-structured interviews with the students were conducted with eleven students to collect more in-depth data for the research question 1 regarding the overall perceptions of the students. The students volunteered to participate in the interviews conducted through video calls in Google Meet which lasted for about 20 minutes each. The videos were recorded, and contents were transcribed. During the interviews, the participants were encouraged to answer the question: What do you think about the Google tools used in your online English learning?

A descriptive statistical analysis of the questionnaire was performed using version 20 of the Statistical Package for the Social Sciences (SPSS). Responses to each survey question were imported into SPSS from Google Forms, and complete data from 128 respondents was plotted on the SPSS interface for each question. A Descriptive Statistics Test with means and standard deviations was used to measure the students' overall perceptions, and independent samples t-Tests were used to compare groups regarding gender and year. The acceptable statistical significance level was set at < 0.05 . And the interview data was subjected to content analysis in which data are gathered and interpreted according to similar concepts and themes [53]. Quantitative data may be statistically analyzed to gain an understanding of the patterns and frequency of this issue, whereas qualitative data from interviews can provide in-depth insights [54].

4 FINDINGS

4.1 Findings from the questionnaire

Research question 1: What are the students' overall perceptions of the Google tools used in online English learning? Table 1 displays the results of the Linkert-scaled items in the questionnaire that were measured by a descriptive statistics test. The overall mean score of 3.93 showed the students had favorable perceptions of the Google tools used.

Table 1. Mean and standard deviation (SD) of perceptions of the Google tools

Item	N	Mean	SD
1. The Google tools are easy to use.	128	4.30	.609
2. The Google tools are user friendly.	128	4.45	.514
3. The Google tools are simple to use.	128	4.35	.838
4. The use of the Google tools motivated me to learn English.	128	3.49	.851
5. The use of the Google tools assisted me to be autonomous in learning.	128	3.78	.904
6. The use of the Google tools improved my learning performance.	128	3.27	.707
7. The use of the Google tools increased my engagement in the learning.	128	4.12	.759
Overall	128	3.93	.740

It was noticeable that the item with the highest mean score (4.45) was Item 2. User-friendliness is the feature that was most appreciated by the students. The second place, with a mean score of 4.35, was Item 3, indicating that for the students, the use of the Google tools is simple. The third item had a mean score of 4.30, which pointed out that the students highly agreed that the Google tools were an easy technology tool for supporting their online English learning. In fourth place was Item 7, with a mean score of 4.12, meaning that the students strongly believed that using the Google tools engaged them in the learning process. The next items in the table are Item 5 (mean score of 3.78), Item 4 (mean score of 3.49), and Item 6 (mean score of 3.27).

Research question 2: Is there a significant difference in perceptions between male and female students in online English learning? Table 2 shows the comparison of perceptions of the Google tools by gender for all seven items. The results were measured by an independent-samples t-test. Overall, the findings in most items indicated that there was no significant difference in perceptions between male and female students toward the Google tools used in learning English courses online. However, in details, it was found that in Item 1 ($p < .05$) there was a significant difference in students' perceptions on the ease of the Google tools, according to which female students (mean score of 4.35) had higher perceptions than male students (mean score of 4.27). The findings revealed there was no significant difference in perceptions between male and female students in the other items. It could be noticed that there were contradictory results from the students' perspectives in the remaining items. Females seemed to express greater levels of agreement on the user-friendliness (item 2) and the simplicity of the Google tools (item 3). Meanwhile, males appeared to have higher perceptions than females in the items on the effectiveness of the use of the Google tools for motivation enhancements (item 4), autonomy development (item 5), learning performance improvement (item 6), and engagement increase (item 7).

Table 2. Comparison of perceptions of the Google tools by gender

Item	Gender	N	Mean	SD	Sig.
1. The Google tools are easy to use.	male	74	4.27	.556	.017
	female	54	4.35	.677	
2. The Google tools are user friendly.	male	74	4.42	.497	.100
	female	54	4.48	.540	
3. The Google tools are simple to use.	male	74	4.27	.764	.475
	female	54	4.46	.926	
4. The use of the Google tools motivated me to learn English.	male	74	3.55	.878	.227
	female	54	3.41	.813	
5. The use of the Google tools assisted me to be autonomous in learning.	male	74	3.88	.859	.056
	female	54	3.65	.955	
6. The use of the Google tools improved my learning performance.	male	74	3.30	.735	.245
	female	54	3.24	.671	
7. The use of the Google tools increased my engagement in the learning.	male	74	4.16	.722	.327
	female	54	4.06	.811	

Research question 3: Is there a significant difference in perceptions between second year students having prior experience in using the Google tools in online English learning and first year students having no experience? Table 3 displays the opinions of first- and second-year students regarding the use of Google tools in online General English classes. The results revealed that first-year and second-year students differed significantly in Item 7 ($p < .05$) regarding the effectiveness of Google tools in enhancing student engagement in learning. Specifically, first-year students had a mean score of 4.16 on the perception scale, while second-year students had a mean score of 4.06. The findings failed to reveal

a significant difference in perceptions between the two groups for the remaining six items. However, the results revealed mixed results. First-year students appeared to have greater perceptions of ease (item 1, mean score of 4.32), user-friendliness (item 2, mean score of 4.54), and motivation enhancement (item 4, mean score of 3.54). Second-year students appeared to be more in agreement regarding simplicity (item 3, mean score of 4.43), autonomy development (item 5, mean score of 3.88) and learner performance improvement (item 6, mean score of 3.31).

Table 3. Comparison of perceptions of the Google tools by year

Item	Year	N	Mean	SD	Sig.
1. The Google tools are easy to use.	First	63	4.32	.618	.714
	Second	65	4.29	.605	
2. The Google tools are user friendly.	First	63	4.54	.502	.397
	Second	65	4.35	.513	
3. The Google tools are simple to use.	First	63	4.27	.954	.133
	Second	65	4.43	.706	
4. The use of the Google tools motivated me to learn English.	First	63	3.54	.877	.423
	Second	65	3.45	.830	
5. The use of the Google tools assisted me to be autonomous in learning.	First	63	3.68	.947	.169
	Second	65	3.88	.857	
6. The use of the Google tools improved my learning performance.	First	63	3.24	.734	.804
	Second	65	3.31	.683	
7. The use of the Google tools increased my engagement in the learning.	First	63	4.14	.692	.043
	Second	65	4.09	.824	

4.2 Findings from the interviews

The findings gained from the interview were categorized in two main themes: (1) the respondents' opinions on the usability of the Google tools and (2) effects of using the tools in the learning process.

Usability of the Google tools in your English learning. The interviewed students made it abundantly clear that the utilization of Google products in the process of teaching and learning English is unquestionably doable, as was clearly demonstrated by the students. The opinions of some students are as follows:

“I think I can do everything almost easily. I can log and log out easily. I get assignments, and do assignments regularly on time, and update results quickly.” (Student 3)

“Surely, it is easy to use and quite fast, but the grading is quite strict.” (Student 6)

“I think the login and doing the assignments are very fast, easy and accurate.” (Student 8)

“I think it is almost not difficult to use the computers and use the applications. I still remember the first days I use the computers. Several times I forgot my passwords. So, it took me longer to log in than my classmates did. However, I decided to note the password down on my course book. Soon after that I met no difficulties.” (Student 9)

“I think we have no difficulties in following the instructions and it is very easy to do the learning tasks on computer.” (Student 11)

These findings seemed to support how the students responded in the first three items of the questionnaire on the ease, the use-friendliness, and the simplicity of the Google tools. This helped the researchers gained more understanding about the use of the Google tools in the general English courses delivered in the online mode.

Effects of using the Google tools in the learning process. Many respondents mentioned the positive impacts that the used tools bring about in the learning process. Several interviewees shared about their enjoyable learning experiences when learning English online with the Google. Here are the responses:

"I think it's very interesting to learning English like this. I feel it's more comfortable than I learn at school. I still remember the first lesson when I was a bit surprised. Then, the more I learn, the more I like it." (Student 1)

"I feel that it is lots of fun to learn with technology. I can learn and play with my friends. I like the comfortable learning environment in the class." (Student 5)

"In my opinion, it is very interesting. I experienced a new way of learning. And I do not find it difficult. Everything is very modern. I love doing homework on the computer like this." (Student 7)

"I think it is enjoyable. I like going to class and learn English like this." (Student 9)

"I feel it is interesting. And I feel better when I learn this way." (Student 10)

"It's great. I feel excited whenever I open the computer and log in with my account and do my learning tasks." (Student 11)

The respondents also mentioned the effectiveness that the used tools brought about for their learning. Here are some students' responses:

"I think I learn English better with the Google tools. I can manage my learning process better. I can see what I learned in the previous week and what I need to prepare for the next week because it displays on the screen on the Google Classroom app. Besides that, I am sure that all of us can type faster and more accurately, and we use computers more skillfully." (Student 1)

"I think the applications are good for me. Before, my learning results with English at school were not very good. I used to be very lazy about learning English. Learning with Google's tools helps me be more diligent in my learning. I think I have completed all the exercises. I am happy about that." (Student 5)

"I think I have learned more things. I pay more attention to my learning. And I become more careful and make fewer mistakes. Usually, I am careless in my writing and in doing classwork and homework. However, as I learn the technology, I need to concentrate more in order not to make unnecessary mistakes in spelling. Besides that, I use the computer and the internet better." (Student 6)

The findings obviously revealed that using Google tools to learn English had positive impacts on students. It appeared that their computer skills and learning abilities were more advanced. Student 1 claimed his typing skills were improved, while student 6 reported that she was more proficient with the computer and internet. The findings from the interviews were consistent with the results of the questionnaire items on motivation and autonomy. This was evident in the responses of Students 1, 5, and 6. Student 5 expressed happiness when the tools helped her become more diligent. Student 1 could keep track of the learning process and Student 6 took better control of their learning.

5 DISCUSSION

The purpose of this study was to investigate the perceptions of students regarding the use of four Google tools (Google Classroom, Google Forms, Google Sites, and

Google Meet) as a single technological solution to fulfill the demand for online general English courses during the COVID-19 pandemic. There were three research questions concerning the students' overall perceptions, whether males and females had different perceptions, and whether first year and second-year students had different perceptions.

Regarding students' overall perceptions, the findings supported that university students had highly positive perceptions of towards the application of the Google tools for their online English courses learning. These were consistent with the results from [42–52] in which students felt like using the Google tools, and emphatically perceived the tools as helpful, efficient, and interesting learning aids. Also, students made it abundantly clear that the utilization of Google products in the process of teaching and learning English is unquestionably doable, as was clearly demonstrated by the students. This lends credence to the findings obtained from the research conducted by Alsulami [17] which suggests that the use of technological instruments in the process of language acquisition is both possible and beneficial. These findings also echoed those found in research conducted by Chinnery [6] in which usability and the importance and educational value of the Google tools were highlighted.

Although the study mainly focused on exploring students' overall perceptions towards the Google tools, it revealed that the effectiveness of using of the Google tools was evident among the students who demonstrated a high level of motivation in their educational pursuits. These findings appear to be in agreement with the findings that were discovered in the earlier studies that were carried out by [7], [10], [17], [20], [21], [51], and [52] according to which the incorporation of technology into educational settings results in increased levels of enjoyment, positive attitudes toward the process of learning, and higher levels of intrinsic motivation. Besides that, the results indirectly provided practical evidence for the arguments on the benefits of using technology in the language classroom proposed by Reinders [25], Richards [19] and Cutter [22]. Cutter [22] pointed out students' motivational reference to technology over traditional paper learning materials. Richards [19] accentuated the outstanding benefits of applying technology to motivating learners in learning languages. Reinders [25] mentioned the potential benefits of technology in developing learner autonomy for students. The aforementioned findings also illuminated Google's [41] description of the Google tools' feature that improved teaching and learning experiences.

As for the gender differences in perceptions among the students, the findings showed that female students had higher perceptions on the ease of the Google tools in comparison to males in Item 1. The results seemed to support the findings of Hohlfeld et al. [30] and Hou [31] in which females displayed greater degree of perceptions on computer skills and usage frequency [30], and females demonstrated higher levels of perceptions of using mobile-assisted tools [31]. The findings, nonetheless, appeared to be against the findings of [26–28], in which males reported higher agreement on the use of digital library [26], the ease of e-learning [27], benefits of technology [28]. With regard to the findings in the remaining six items, there were no significant differences found between males and female, which was in accordance with the results by Davis and Davis [32], Hung et al. [33], and Tekinarslan [34].

In terms of prior experience of using the Google tools, the findings indicated that second-year students who had more experience of this learning tools had lower mean score in item 7 on the engagement enhancement compared to first-year students who used the tools for the first time. These findings seemed to counter previous studies [34], [37–39]. Tekinarslan [34] obtained students who used computers

and the Internet more often scored significantly higher on all subscales of the online technology self-efficacy scale. Ekahitanond [37] uncovered those students who had used Google Classroom liked it more than those who had not. Jan [38] found that online learners were happier and enjoyed learning more. Shen et al. [39] discovered that students who took more online courses had more confidence in their online learning abilities.

6 CONCLUSION

The findings of this study indicate that the students had favorable perceptions of the use of a combination of four Google tools (Google Classroom, Google Forms, Google Meet, and Google Sites) to learn English as a mandatory subject at the university. The students believed the utilization of the tools enhanced their educational experience. They delighted in expanding their knowledge. They developed a heightened awareness of the learning and instructive activities. At the same time, the process of learning for them turned out to be both meaningful and beneficial. According to the findings, it is obvious that the implementation of the Google tools has resulted in a more efficient classroom setting for teaching English as a foreign language within the given context. The students' ways of thinking and their progress in English were both influenced favorably by the tools. These findings provide additional evidence for the benefits and effectiveness of using Google products in English as a foreign language instruction and study within higher education institutions located within Vietnam. The findings also indicate one possible solution to introducing emerging technologies in online English teaching and learning and highlight opportunities for further exploration and research.

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