STUDENTS’ PERCEPTIONS TOWARDS USING GOOGLE SLIDES AND GOOGLE CLASSROOM AS ONLINE COLLABORATIVE TOOLS IN MANDARIN LEARNING

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Abstract: Covid-19 outbreak in Malaysia had a major impact on education. Lecturers have to shift from conventional face-to-face teaching to Open and Distance Learning (ODL) to continue delivering knowledge to their students. It was a big challenge for lecturers in the teaching of Mandarin as a foreign language which include listening, speaking, reading and writing skills. This situation would inevitably affect the learning outcome of the subject. Therefore, lecturers are exposed to technological learning tools and applied flipped classroom approach in teaching which prior use Google Applications namely Google Slides (a web-based presentation program, allowing comment and edit in real-time among teammates and lecturer) and Google Classroom (a web service which enables lecturer to create, share, comment and evaluate assignments in a collaborative teaching and learning environment) in Mandarin course. The use of technology in teaching is not only to enhance students’ learning but also to equip students with the technological and collaborative tools while preparing them for future academic. Surveys were conducted to a government university’s undergraduates taking Introductory Mandarin Level 1 in government undergraduate to elicit student perceptions of using the said applications to do language learning task and the effectiveness in building a collaborative learning environment. The results showed that this approach managed to boost up students’ participation in online learning, majority of the students prefer using such applications for future courses given that they can benefit from the lecturer’s immediate written feedback and easy access of course materials.

Keywords: Collaborative learning; Google Slides; Google Classroom; Mandarin learning
Introduction
The Internet has the feature of being widely used in education and it is inevitable that this feature is becoming more important day by day. Recently, the Internet has been seen as an important learning tool, where a lot of schools and universities try to implement the technological teaching and learning in the classroom. Universiti Teknologi MARA (UiTM) has already adopted blended learning method which means a mix of face-to-face and online learning in the classroom since many years ago. In an unprecedented turn of events, Covid-19 has changed the way students are educated around the globe within a short span of time (Chung, Subramaniam, & Dass, 2020). The spread of COVID-19 and the ongoing MCO have shifted the teaching and learning processes tremendously from face-to-face meetings to online learning platform. To safeguard the health of staff and students, starting from 23rd of April 2020, UiTM has implemented the Online Distance Learning (ODL) in order to accommodate their education system.

In the light of the aforementioned situation, building student autonomy in learning and assisting them in becoming active learners in digital environment, collaborative learning has been implemented as a teaching approach. Collaborative learning is not a new teaching strategy and research on collaborative learning in the classroom can be dated back to the early 1970s (Dillenbourg, Baker, Blaye, & O’Malley, 1996). One important aspect of Vygotsky’s socio-cultural theory is the “Zone of Proximal Development” which argues that a learner cannot achieve an understanding of a new idea or concept unless he/she acquires help or feedback from a teacher or a peer (Vygotsky, 1978). In Vygotsky’s view, providing the appropriate peer interaction and collaboration is an important way to assist students for their cognitive growth and problem solving. As a result, students will have enough of a "boost" to achieve the task.

Collaborative learning is student centered, leading to an emphasis on learning as well as teaching and to more student ownership of responsibility for that learning (Lowman, J., 1987). It is the process of two or more students work and learn together to solve problems, complete tasks, or learn new concepts. The instructor will compose or construct knowledge on substantive issues in a small groups’ participants of differing ability levels and use a variety of learning activities to master material initially. Each member of the team is responsible to learn and for helping teammates to learn.

Therefore, this study aims to probe students’ perceptions of using Google Slides and Google Classroom applications to do language learning task and the effectiveness in building a collaborative learning environment. Based on the data gathered from questionnaire, the study shall attempt to discuss and analyze the factors that contribute to students’ perception. Furthermore, this study sought to investigate how Google Applications as an online collaborative tool can possibly change the way students work together in the language classroom. Possible limitation of using the applications and relevant improvement plans shall also be suggested after the analysis, in hope that it will enhance the quality of teaching and learning through collaborative learning in Mandarin language course.

Problem Statement
The implementation of Movement Control Order (MCO) due to COVID-19 pandemic has affected the teaching method from face-to-face classes to ODL mode in higher education institutes. A totally different mode for ODL where students started their learning activities from home with no physical social interaction with lecturer and group mate to perform course
assessments can affect academic performance (Allam et al., 2020). Hence, lecturers implemented a different online teaching method to limit the disruption of education. Moreover, for a Mandarin subject, it involves 4 basic listening, reading, writing and speaking skills, and Google Applications in this circumstance may take place on it. Students can practice all 4 skills offline at anytime, anywhere. Therefore, a study on the students’ perception using Google Slides and Google Classroom as online collaborative tools in Mandarin learning seeks to identify the significant relationship between the satisfaction, efficiency and effectiveness use of Google Applications among students.

**Research Objective**
This study examines students’ perceptions towards using Google Slides and Google Classroom for teaching and learning as a cloud-based collaborative tool in the Introductory Mandarin Level 1 students’ classroom. The present study will try to investigate the following research objectives:

1. To identify students’ satisfaction towards the use of Google Slides and Google Classroom as online collaborative tools in learning Introductory Mandarin level 1.
2. To analyze the efficiency towards the use of Google Slides and Google Classroom as online collaborative tools in learning Introductory Mandarin level 1.
3. To analyze the effectiveness towards the use of Google Slides and Google Classroom as online collaborative tools in learning Introductory Mandarin level 1.

**Literature review**
According to Tamimi (2017), Web 2.0 technology is a concept referring to a system of advancing technologies which are currently being used by millions of people around the globe for interaction, collaboration, networking, and entertaining purposes. Web 2.0 technologies have been integrated for many years into educational systems for the purpose of facilitating curriculum design, enriching pedagogical material, and enhancing collaborative work among teachers and students (Zeiadee M. Khalil, 2018).

In this era of technological advancement, the use of Google Classroom and Google Slides has shown the benefit to second language learning. According to Janzen, M. (2014) Google Classroom including Google slides is designed purposefully simplify the instructional interface and options used for delivering in entire class. Matthew Andrew (2019) has stated working together online produce a presentation in groups on Google Slides. This may allow students to work together more efficiently on a shared project, receive language and content-related feedback, and learn from their partners as they view and edit each other’s work as it is being created.

Google Classroom provides opportunities for students to be independent, engaged and motivated because most of young learners tend to use technology in their daily life (Mike Okmawati, 2020). Instructors can support their face-to-face classes with online learning through Google Classroom (Halverson, Spring, Huyett, Henrie, & Graham, 2017)

**Perception on Satisfaction**
Gray & DiLoreto (2016) confirmed that course structure/organization, learner interaction, student engagement, instructor presence, and student satisfaction are the appropriate dimensions of online learning. Our suggestion of using learning satisfaction as an important
outcome is also consistent with the recent forces of marketization which increasingly regard students as consumers of educational product or service (Bunce, Baird, & Jones, 2017).

**Perception on Efficiency**
Students get timely e-learning materials which will help them to improve their e-learning experiences (Alim et al., 2019). However, some researchers found that the limitation of Google Classroom also deprived the efficiency on it. Despite the efficiency of Google Classroom in teaching and learning, my search of literature revealed some of the challenges encountered by students while navigating the e-classroom; non-personalized user-interface, lack of communication with peers, privacy for assignments, and lack of reliable internet facilities at home (Kumar et al., 2020). Alim et al., (2019) also posit that one of the crucial barriers that deprive the efficiency of Google Classroom is lack of accessibility to smart gadgets, data plans and a lack of online Google accounts.

**Perception on Effectiveness**
Effectiveness of learning also depends on how the content is curated to online environment and also in understanding and addressing the constraints faced by students (T. Muthuprasad, S. Aiswarya, K.S. Aditya, Girish K. Jha, 2021). More recently, it has been demonstrated that learning remotely on the digital platform fatigued many students, decreased their interest, and the perceived heavy workload negatively influenced their motivation (Niemi & Kousa, 2020). This finding also assimilates with Akyildiz’s (2020) research where he finds that lack of interaction and communication in online classrooms can possibly lead students to new challenges such as effective time management, feelings of isolation, undue worry about exams, and unstructured educational habits.

**Methodology**
This study was conducted at a government university in Malaysia to the undergraduate who had taken and completed Introductory Mandarin Level 1 in February year 2021. This course is open to all students from different backgrounds. All the students under the research target were assigned to utilise Google Slide and Google Classroom as online collaborative learning teaching method. After the teaching and learning activities had been conducted and completed, all the students were given the online survey administered through Google Form.

The online survey form was distributed to all students by all students in order to collect the data from the voluntary respondents. The survey was kept confidential and was made clear to the students that the survey results will not affect students’ exam result. The online survey is a questionnaire that consist of three parts: A) Personal Information; B) Students’ Perception on Google Slides and Google Classroom; and C) Students comment and suggestion. Questionnaire source was modified from Zeiadee M. Khalil (2018). The 5-point Likert scales were used in the Part B ranging from strongly disagree to strongly agree.

From the total number of 139 full time undergraduate students who had registered to this course, 118 of them had completed and returned the questionnaires that led to 84.89% response rate. As mentioned earlier, the participants indeed came from different professional and educational backgrounds. Hence, the respondents consisted of 29 in Tourism Management Studies, 34 in Human Resource Management Studies, 30 in Office Systems Management Studies, 10 in Economics and Financial Studies, 13 in International Business and Management Studies and 2
Marketing Studies. Data collected from the online survey were analysed using SPSS or other statistical analysis tool.

**Implementation of Google Slides**
Google Slides is an online platform that lets lecturers and students create and format presentations and work with other people. Presentations can be shared, opened, and edited by multiple users simultaneously and users are able to see slide-by-slide and character-by-character changes as other collaborators make edits. It allows instant feedback and collaboration on text and image form when lecturers and students online at the same time. In the meanwhile, students are able to find the mistake and do amendment base on lecturer’s feedback simultaneously promptly. Figures 1 and 2 show the teaching and learning process using the Google Slides. In this study, students were divided into a group of 4. Each group discussion was conducted through any platform that students preferred such as WhatsApp Room or Google Meet. After the discussion, they responded by giving their feedback or answering in the slides.

![Figure 1: The teaching and learning process uses Google Slides](image1)

![Figure 2: The teaching and learning process uses Google Slides](image2)
Implementation of Google Classroom

Google Classroom is a blended learning platform which allows lecturers to create classes, distribute assignments, post announcements, upload teaching and learning materials, grade assignments and send feedback. Google Classroom as an alternative approach to the traditional methods of teaching and learning, the students were able to learn collaboratively and take teacher written feedback into consideration for the development of their language skills. (Zeiadee M. Khalil, 2018). Course materials can be uploaded in Google Classroom for students to practice listening, reading, speaking and writing skills anytime and anyway after the lecture. Figures 3 show the course materials uploaded through Google Classroom and Figure 4 show the grading for student’s group assignments through Google Classroom.

Figure 3: Course materials uploaded through Google Classroom

Figure 4: Grading for student’s group assignments through Google Classroom
Result

Descriptive Statistics Analysis

Table 1: Descriptive statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Perception</th>
<th>Satisfaction</th>
<th>Efficiency</th>
<th>Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>4.6017</td>
<td>4.5480</td>
<td>4.6017</td>
<td>4.6737</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.4878</td>
<td>0.4644</td>
<td>0.5253</td>
<td>0.4256</td>
</tr>
<tr>
<td>Count N</td>
<td>118</td>
<td>118</td>
<td>118</td>
<td>118</td>
</tr>
</tbody>
</table>

Table 1 summarized the result on the variables of perception, satisfaction, efficiency and effectiveness based on the data collected from the 118 students’ perceptions towards using Google Slides and Google Classroom as a collaborative learning tool. First, this paper will discuss about mean and standard deviation of those variables. As state in the Table 1 above, the mean for perception is 4.6017, while its standard deviation is 0.4878. Then, the mean and standard deviation recorded for satisfaction are 4.5480 and 0.4644. At the meantime, the mean for efficiency is 4.6017 where its standard deviation is 0.5253. The mean of the last variable, effectiveness is 4.6737 while its standard variable is 0.4256. All means score in Table 1 indicated that generally students agreed the usage of Google Slides and Google Classroom as a collaborative learning tools in Mandarin course.

Correlation of Variables in Study

Correlation in the analysis of study is important to determine the relationship between both the dependent variable and the independent variable. The correlation is a scope of study between two variables. Table 3 shows the correlation of the variables between perception, satisfaction, efficiency and effectiveness in using Google Slides and Google Classroom as collaborative learning tools.

Table 2: Correlation of variables in study

<table>
<thead>
<tr>
<th></th>
<th>Perception</th>
<th>Satisfaction</th>
<th>Efficiency</th>
<th>Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perception</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.7456</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efficiency</td>
<td>0.5820</td>
<td>0.7099</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>Effectiveness</td>
<td>0.7754</td>
<td>0.7107</td>
<td>0.5512</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

The above table shows that there is a strong and moderate correlation between two variables. The variables that have the strongest correlation value are perception and effectiveness with the value of 0.7754, followed by the correlation of 0.7456 between perception and satisfaction is 0.7456. The correlation between satisfaction and effectiveness is 0.7107 while the correlation between satisfaction and efficiency is 0.7099. Besides, the correlation of perception between efficiency is 0.5820 and the correlation with efficiency and effectiveness is 0.5512. Therefore, as can be seen all of the variables are significant importance to the study.
Regression Analysis

Table 3: Summary of Regression Analysis Output

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.8243</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Square</td>
<td>0.6795</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.6710</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.2797</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>118.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ANOVA

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Significance F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>3.0000</td>
<td>18.9136</td>
<td>6.3045</td>
<td>80.5587</td>
<td>0.0000</td>
</tr>
<tr>
<td>Residual</td>
<td>114.0000</td>
<td>8.9216</td>
<td>0.0783</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>117.0000</td>
<td>27.8352</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.0247</td>
<td>0.2991</td>
<td>0.0825</td>
<td>0.9344</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.3720</td>
<td>0.0942</td>
<td>3.9490</td>
<td>0.0001</td>
</tr>
<tr>
<td>efficiency</td>
<td>0.0559</td>
<td>0.0702</td>
<td>0.7966</td>
<td>0.4273</td>
</tr>
<tr>
<td>effectiveness</td>
<td>0.5622</td>
<td>0.0868</td>
<td>6.4785</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

The regression analysis is the method to probe the relationship between predictor and outcome variables. The opinion may or may not influence by each entity due to its own individual characteristic. Based on the Table 4, the model result of R square value is 0.6795 which indicates that 68% of the dependent variable of using Google Applications as collaborative learning tools can be predicted by independent variables. The ANOVA in Table 4 was a test to justify the value of significant of the independent variable and dependent variable. As a result, the ANOVA model shows that the value of the Significance F is 0.000 and the F = 80.5587 revealed that the statistically significant. Hence, it shows that the study towards the students’ perceptions on Google Slides and Google Classroom as online collaborative in learning Mandarin is reliable.

Based on the Table 4 above, the relationship between satisfaction and effectiveness is statistically significant which the p-value is lower than 0.05. However, the result on efficiency of using the Google Slides and Google Classroom as collaborative learning tools with value of 0.4273 indicated that it is not significant. This variable was revealed in the questionnaire by the questions of “Google Slides collaboration positively influence my learning” and “Working with my team helps me produce better project quality than working individually".
Discussion

Other than the numerical results, some of the advantages reported by the participants on learning through the collaboration on Google apps are ease of use, working together from different places, and being able to give feedback online which are in line with the findings by Mathew (2019). Collaborative methodologies in which students interact with their peers through the use of different social web tools are being increasingly used in universities (Mathew, 2019). These online collaborative methodologies allow students participate in their own learning actively. Majority of the students enjoyed using Google Apps due to the manageability and convenience. Google Classroom is considered one of the most speedily implemented tools in higher education (Kumar & Bervell, 2019).

Although the online learning tools can completely achieve some specified goals, but on the other hand, it still has some limitation especially in psychological well-being. Therefore, the one-size-fits-all approach in the implementation of ODL is not applicable as this not only hinders the flow or the content delivery within the virtual classroom, but this also affects the psychological well-being since users are prone to get distressed (Muhammad F.S., Nur A. A., Siti N. A. H. & Farahiyah A. M. N., 2020). Different online tools such as Kahoot, Quizizz, Quizlet, Goformative and etc. can also be applied in teaching for enhancing students' understanding and enjoyable purpose.

Actually, students are exposed to certain technologies for a long period of time, however, they are not realizing or familiar with the usage of those devices as ODL tools. Students need to shift the favor of using devices as entertainment, social media, online shopping and etc. purpose to ODL more frequently. It may bring a lot of challenges to the students in term of patience, determination and concentration. Furthermore, Google slides has the limitation when using it in creating exercise where students have less opportunity to try out each of the questions in slide but it may be more beneficial to those active learners. Students who did not meet and know each other well through face to face, when assigned to group project, they might have the difficulty on communication to each other. As the result, those limitation stated as above might contribute or might have contributed to the variable of efficiency which the P-value shows 0.4273.

Conclusion

The aim of this study was to identify the perceptions toward using Google Slides and Google Classroom as online collaborative tools in learning Mandarin. The findings of this research has a better understanding on students’ satisfaction on the advantage of the respective online tools and it is effective for some learning outcome. In addition, the findings of this study may also help lecturers to design a more creative and interesting online teaching and learning process as well as having 21st century learning features as expected and emphasized by the Ministry of Higher Education (Ahmad, F., Rosli, D.I., Hamzah, N., Wan Hassan, W.A.S. & Z, Zubir, 2020).
References


