

## The Perception of Undergraduates on the Use of GramCHQ (Gram-Checked) for Online Distance Learning (ODL) during the Covid-19 Pandemic

Kimberley Lau Yih Long<sup>1</sup>, Christine Jacqueline Runggol<sup>2</sup>, Jacqueline Susan Anak Rijeng<sup>3</sup>

<sup>1,2 & 3</sup> Universiti Teknologi MARA Cawangan Sarawak,  
94300, Kota Samarahan, Sarawak

<sup>1</sup> [kimberley@uitm.edu.my](mailto:kimberley@uitm.edu.my)

<sup>2</sup> [christine@uitm.edu.my](mailto:christine@uitm.edu.my)

<sup>3</sup> [jacquelinesusan@uitm.edu.my](mailto:jacquelinesusan@uitm.edu.my)

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### Abstract

The COVID-19 pandemic has transformed our education system whereby the largest online movement in the history of education was witnessed and the way lessons were delivered was reshaped. The use of Grammar teaching tools from traditional white boards to electronic screens is worth investigating, especially from the viewpoint of first year Diploma undergraduates as they transitioned from secondary education to tertiary education. This paper presents the acceptance of using GramCHQ (Gram-Checked), a grammar teaching tool designed for Integrated Language Skills 1 (ELC121) ODL lessons. The objectives of the study were to identify the perceptions of undergraduates towards lessons conducted using GramCHQ and elicit their feedback on the effectiveness of GramCHQ lessons. A total of 97 undergraduates from four different Diploma programs participated in this study. They were guided on how to use GramCHQ before being asked to experience the lesson themselves. After the lesson, they were asked to fill in e-questionnaires designed in Google Form. The findings from the survey revealed that participants reacted positively to GramCHQ with high learner's self-perceptions of GramChQ usefulness ( $m=4.12$ ). In addition, good perceptions ( $m>3.80$ ) were obtained in terms of GramChQ's interest, relevance, presentation, technology, enjoyment, memorisation and future demand. Furthermore, GramCHQ is an effective medium for Online Distance Learning as its low bandwidth caters to a larger population as well as engaging its learners' interests with its interactive game-based learning approach. Findings from this study provide a basis for educators to plan effective online teaching strategies for digital classrooms.

**Keywords:** Grammar, Teaching tool, Higher learning, Online Distance learning, Undergraduates

## 1.0 Introduction

### 1.1 Background of Study

The COVID-19 pandemic has caused quite a stir since it first broke-out in early 2020. In Malaysia, the government has imposed the Movement Control Order (MCO) on March 18, 2020. As a result of that, all learning institutions were forced to shut and teachers were asked to resort to online teaching ("COVID-19 turns online", 2020). All this came as a shock to everyone as teachers were then forced to learn how to employ various online teaching tools to aid them in their virtual classrooms.

Teaching methods were redefined due to the COVID-19 pandemic. According to the Chief Minister of Sarawak, Datuk Patinggi Abang Johari Tun Openg, educators need to engage in more innovative teaching methodologies to face the challenges of 21st century education as well as the ongoing pandemic ("Abang

Johari: Educators”, 2021). Moreover, teachers, universally, are dealing with Generation Z students who have grown up in a hyper-connected world and the smartphone is their preferred method of communication (Kasasa.com, 2021). This group of students cannot be fully satisfied with the traditional way of teaching and learning hence interesting and fun teaching aids are needed to enhance learning among them.

As in the case of UiTM, lecturers who were assigned to teach ELC121 (Integrated language Skills 1) had to find and adapt materials found both online and offline for their respective classrooms, catering to the needs of their students. All the while, both lecturers and students had their textbooks to rely on but with the sudden emergence of the pandemic, teachers had to create and design their own teaching materials as not all students had access to the prescribed textbooks. Lecturers had to move fast and get all their teaching materials ready as well as master various online teaching tools in such a short span of time before the semester re-opens. With the impending situation, the GramCHQ was created.

## 1.2 Problem Statement

Language teaching is not as easy as people think it may be and teaching grammar is a challenging task in ESL (English as second language) classrooms. A first-year university undergraduates in Malaysia should have gone through 13 years of grammar lessons (2 years in kindergarten, 6 years in primary schools, 5 years in secondary schools). They should have mastered all the necessary skills of grammar and should be able to use it accurately. However, this is not the case for the majority of the students as they still cannot speak and write with grammar accuracy.

Over the years, ESL teachers and lecturers were faced with various challenges when teaching grammar as it is always perceived as the most difficult skills to teach and the most boring skill to learn (Al-Mekhlafi & Nagaratnam, 2011; Leki, 1995; Schulz, 2001). There are a plethora of studies that investigated the effectiveness of various strategies for teaching grammar to non-native speakers of English. Cohen and Sasson (2016) discovered that students preferred online quizzes as mode of assessment after a grammar lesson because they are interesting, engaging, user-friendly, interactive and provide immediate feedback to them. The use of online quiz tools such as Kahoot! Quizizz and Wordwall.net, elevated students' intrinsic and extrinsic motivations (Segaran & Hashim, 2020). Teachers on the other hand welcomed the fact that these online quizzes promote active participation among students. Teachers may employ many teaching tools to encourage active participation as well as to make challenging and boring grammar lessons more interesting (Cohen & Sasson, 2016; Kaur & Nadarajan, 2020). A majority of English teachers said that most of their students preferred fun learning over traditional chalk-and-talk methods (Khairul, 2018).

Furthermore, students were also able to understand grammar rules better through the use of technology such as computers, smartphones and the Internet (Mustaffar et al., 2019; Robertson, 2019; Ta'amneh, 2017). The integrated usage of technology should be further utilised as it enables teachers to keep track of

their students' progress thus enabling them to assist their students when there is a need to do so (Afsyah, 2019; Norazlan, et al., 2021; Refat, et al., 2020).

Nevertheless, the use of technology in teaching grammar from the above-mentioned studies require strong internet connection. In Sarawak, internet access remains a problem even for those living in the wireless village due to weak, slow and unstable connectivity (“Grouses over poor”, 2020). This problem makes the teaching of grammar even more challenging when moved on screens as issues such as technical issues, unfamiliar technologies, computer literacy, time management, self-motivation, overloaded traffic in the Learning Management System (LMS) will arise. Hence, it is important to create a grammar teaching tool which is able to create an interesting learning environment, promotes self-directed learning, provides feedback on the lesson and most importantly is accessible with low bandwidth. In order to address all these characteristics, a Google Form can be used to integrate all these elements as a platform to teach English grammar in ODL lessons.

To the best of the researchers' knowledge, research on the use of Google Form as a grammar teaching tool represents a significant gap. Most of the studies done centre around its usage as an assessment tool (Alharbi et al., 2021; Dina, 2021; Iqbal et al., 2018; Yunita, 2019). Given the scarce representation of studies related to the use of Google Forms as a medium to teach grammar, the current research can be among the first to investigate undergraduates' perceptions of its usefulness.

## **1.2 Research Objectives**

The specific research objectives are:

1. to identify the undergraduate's self-perceptions of GramChQ usefulness.
2. to determine whether there is any significant difference between Applied Sciences and Social Sciences undergraduates in terms of their perception after using GramCHQ.

## **2.0 Literature Review**

### **2.1 Online Distance Learning (ODL) and Student Perception**

The terms ‘open distance learning’, ‘e-learning’, ‘online learning’, ‘digital learning’ are interchangeable and they refer to the way teaching is done using various web-based technologies (Dhawan, 2020; Nortvig, et al., 2018; Arkorful & Abaidoo, 2014). What characterises this mode of learning from the more traditional way of learning is the need for internet connectivity in order for it to be successful. Its ubiquitous access enables the teaching-learning process to take place anytime and anywhere. There is no longer a need to be in the classrooms or lecture theatres. All that is needed are devices like laptops, desktops, tablets, and mobile phones with fairly good internet access. Many studies have considered this mode of learning as being more

student-centered, more flexible (as learning can occur anywhere and at any time), as well as more current and innovative leaving out the talk and chalk method (Dhawan, 2020; Li & Lalani, 2020; Nortvig, et al., 2018).

In Malaysia, online or digital learning is not foreign. According to Hussin et al. (2009) online learning was first implemented in Malaysia in the late 1990s as Malaysia realised the need to be at par with other developed nations especially in the dissemination of knowledge to students. In short, many developed nations have seen the need to fully utilise Information and Communications Technology (ICT) in this digital day and age as it brings many benefits.

Student perception on the other hand refers to the way students view and look at a situation from a personal perspective and experience (Rajabalee & Santally, 2020). Students will have a positive perception when they are satisfied with the programme or course they are enrolled in (Lee, 2010) while a negative perception occurs when they feel worried, uncomfortable, and demotivated (She, et al., 2021; Yunus, et. al, 2016 cited in Rajabalee & Santally, 2020).

## **2.2 Learning English Grammar in Malaysia**

Students in Malaysia have been exposed to the English language throughout their 11 years of formal education (both primary and secondary school levels) yet some are still weak in terms of grammar competency (Che Musa, et al., 2012 cited in Sarangapani & Hashim, 2022). According to them, this happens because they were taught to memorise grammar rules (rote-memorization). However, for some, their inability to remember those grammar rules fails them when the need arises. Secondly, it is also because they are unable to apply different grammatical structures based on different situations. Veramuthu and Shah (2020) stressed that the teaching of grammar should be meaningful so as students are able to see the relevance of what they have learnt in everyday situations.

One of the many challenges faced by many learners of English in Malaysia is the difficulty in understanding and applying grammar rules (Sarangapani & Hashim, 2022). For example, the basic rule governing the use of Subject Verb Agreement (SVA) whereby the subject and verb must agree in number. Furthermore, other areas that posed problems to them include plural markers, determiners as well as tenses (Segaran & Hashim, 2020).

As a result of this inability to remember so many grammar rules, students are not able to produce grammatically correct sentences both in writing and in speaking (Kho-Yar & Tan, 2015; Thornbury, 1999). Resultantly, students find learning grammar uninteresting thus they would pay more attention to other skills (Sarangapani & Hashim, 2020; Yakubova, 2022). Therefore, the importance of suitable teaching materials must be stressed upon as they will gauge students' interest and motivate them to delve deeper into the topic of the day (Haja Mohaideen, et al., 2020). In a similar vein, Rashid et al., (2019) emphasised the importance

of a teacher's role not only in motivating students to learn but also in selecting the most appropriate teaching materials to be used in the classroom. The materials, according to them, must be user-friendly, interesting and interactive. These features are important as they help to engage students' interest throughout the lesson. Mother tongue interference is also said to be another reason why some students are unable to differentiate different grammatical forms. The researcher claimed that first language interference has led them to make errors related to English grammatical rules, morphology, and syntax (Kho-Yar & Tan, 2015, Mukundan, et al., 2013). Therefore, when students are not able to produce grammatically accurate sentences, their writing skill is also affected (Veramuthu and Shah, 2020).

Another concern raised by Sarangapani & Hashim (2022) and Khor-Ya & Tan (2015) is the archaic way in which grammar is taught to students. In Malaysia, the learning of English stresses more on the mechanics of the language instead of communicative competence (Fazil & Said, 2020; Norazlan et al., 2021). Consequently, learning grammar is deemed complicated as students are unable to construct grammatically correct sentences while writing (Fazil & Said, 2020). They added that, to these students, English is an alien language. They concluded that the focus of any grammar lessons should not be wholly memorizing grammar rules as that can demotivate them from learning. Instead, teachers should help their students to practice and use grammar in meaningful situations through the use of role-play for example. They stressed the importance of fun learning during English lessons. Afsyah (2019) reasoned that clear vocabulary and sound grammar will help to avoid any communication breakdown. Moreover, other factors that cause poor grasp of grammar among learners include learning strategies employed by learners, motivation, teaching strategies and syllabus (Kesumawati, et al., 2006 cited in Segaran & Hashim, 2020).

### **2.3 Previous Studies on Grammar Teaching Tools**

The teaching of grammar has encompassed various techniques from drilling, imitating and memorisation (Ellis, 2012; Zhou, 2008) to the use of technology and educational technology (Al Wasy, 2020; Chambers et al., 2008; Edwards & Roblyer, 2000; Sumardi, et al., 2020; Savage et al., 2013; Lee, 2000; Ross et al., 2010; Taylor & Gitsaki, 2004; Volman & Van Eck, 2001). In this context, educational technology refers to a branch of technology that is utilised and adopted for the purpose of teaching and learning. It comprises both hardware, software as well as other social media and other interactive online tools like 'Kahoot', 'Google Classroom' and 'Quizziz' to name a few (Al Rawashdeh, et al., 2021; Mohd. Basar, et al., 2021). When teachers used technology during the teaching-learning process, students not only reported that they enjoyed their grammar lessons but were also able to remember the grammar rules taught (Stevens et al., 2020).

Harrison and McTavish (2018) suggest those from generations Y (millennials) and Z (post-millennials) have little problems when it comes to using technology because technology is part of their eve-

ryday lives. When they entered this world, the Internet as well as IT gadgets like tablets and smartphones were already in use. These digital natives as they are more commonly known as, have no problems navigating and interacting on various online platforms. The use of video calls, voice-notes, and phone calls available through various messaging applications such as 'Whatsapp' and 'Telegram' can be utilised as a form of communication between educators and students for example to clarify any matters related to the lessons taught (Nor Fauziana Binti Mohd, 2020). Besides, students can also be asked to do their own revisions by rewatching recordings of previous recorded lessons as well as by watching educational programmes such as Education TV and DidikTV channels available online (Mohd Basar et al., 2021). All these online materials have made it easy for all those involved (students, parents, and teachers).

In addition, the inclusion of the game element into the teaching materials is worth to be noted. Fazil and Said (2020) did a study on the effects of using a mobile game application called 'TurTense App' to teach continuous tenses. The feedback received from the participants (indigeneous students) were positive; a majority of them showed positive physical reactions while more than half of them displayed better learning performances. Besides Fazil & Said (2020), other studies on the use of digital gaming to teach vocabulary and communicative skills among students also revealed positive results (Alhabbash, et. al., 2016; Elshami, 2021; Musa, 2015; Rudis & Postic, 2018; Thorne et al., 2012). Among the reasons given included the fact that students were intrigued by the immediate feedback (Taylor & Gitsaki, 2004) and interactive features present in digital gaming (Chen & Yang, 2013; Ebrahimzadeh, 2017; Vaisanen, 2018). Language structure could also be taught to students by integrating digital gaming into the lesson as doing so can heighten students' motivation and lead them to better understanding of language acquisition (Pitura & Chmielarz, 2017; Mahmoud & Tanni, 2012;).

Language games foster interaction and build upon meaningful learning among students as it allows them to understand how a grammar concept which they have learned in class can be applied into real-life situations (Yacob & Yunus, 2021). Students expressed their excitement throughout the lesson when language games were involved and the non-stressful learning environment led to increased motivation among students (Cam & Tran, 2017). This is in line with the results found in Cabrera et al. (2018) and Adeng & Shah (2012) whereby it was revealed that students were more motivated to learn when fun and excitement were injected into their grammar lessons. Continuous exposure to the said learning environment will help to improve students' grammar fluency (Briewin, et al., 2013 cited in Yacob and Yunus (2021).

## **2.4 Google Forms as Teaching Tools**

Google Form is a part of a free, web-based technology tool called 'Google Docs'. It allows users to create text documents, spreadsheets, and presentations (Dina, 2021). For example, a teacher can create worksheets and then later invite students to respond to the designed worksheet. Students have two options in doing so, Universiti Teknologi MARA, Vol. 6, No. 2, 2022

either via email or on a web page. During the designing stage, teachers can choose from an array of question types such as text, paragraph, multiple-choice, lists, check boxes, scale, and grid. As for the types of response, teachers can select from free-form text, instructor-defined scale or even a restricted set of options. Google Forms too can tally students' responses instantly as they would appear in a spreadsheet (Guay, 2022).

Furthermore, Google Form application allows teachers to create interactive learning environments for their students (Dina, 2021; Iqbal et al.,2018). This is because through the application, they can attach model answers, audio-visuals as well as links for students to complement what they are learning in the classrooms. In doing so, students are more engaged throughout the lessons. Given the scarce representation of studies related to the use of Google Forms as a medium to teach grammar, the current research can be among the first to investigate students' perceptions of its usefulness.

As this paper deals with the usage of Google Forms as a platform to teach English grammar therefore it is crucial that those are mentioned. For example, a study done by Alharbi et al. (2021) identified students' perspectives on the use of Google Forms as the medium for online formative assessment in terms of perceived usefulness, perceived risk of cheating and perceived self-efficacy brought positive findings. However, it was also concluded that a high degree of cheating is unavoidable. Also, Yunita (2019) revealed that teachers preferred the use of Google Forms as it is an efficient way to create various types of quizzes and assessments. The researcher reported that the Google Form application also allowed teachers to check students' responses and deliver feedback instantly to their students, hence saving time.

### **3.0 Methodology**

#### **3.1 Description of GramCHQ**

GramCHQ (Gram-Checked), which contains a collection of tasks and Grammar activities, is an interactive online teaching tool designed especially for ELC121 Grammar lessons. It utilises Google Form to create a series of grammar lessons so as to further enhance the undergraduates' knowledge on the forms and functions of the grammatical components. In GramCHQ, there are altogether six lessons on the parts of speech and tenses in GramCHQ; and they are ready to be used for any grammar lessons done via virtual tutoring. With GramCHQ, lecturers are able to create not only various tasks and activities but also link their notes as well so that the undergraduates would be able to do their own revisions when the need arises. Moreover, GramCHQ allows lecturers to evaluate and assess the undergraduates' understanding of the grammar items taught.

GramCHQ was created with its three main objectives to address the current problem of ODL in the E-ESL classrooms. Firstly, one of the objectives for the creation of GramCHQ is to create an interesting

learning environment for undergraduates to learn grammar. The six lessons planned were very carefully structured, taking into account the pre, while and post stages of learning. It not only contains notes and pre-recorded ‘powerpoint’ slides, but also language games and links to many ‘YouTube’ channels which are then used to exemplify the grammar items further (refer to Figure 1). The grammar exercises which have been created take into account varying difficulty levels among the undergraduates.

Next, GramCHQ promotes self-directed learning among undergraduates. As mentioned earlier, it contains a series of 6 lessons focussing on different parts of speech and tenses. All they need to do is to choose the lesson they are interested in. This is also particularly important as CramCHQ provides many grammar exercises which will help them to understand a certain grammatical aspect further. Once they have completed the exercises, they can check their answers alongside the notes which have been provided. Correct answers will be awarded points (1 correct answer equals 1 point) (refer to Figure 2).

Another objective which led to the creation of this innovation is to produce a platform which allows both the lecturers and undergraduates to gain feedback on the success of each grammar lesson. This was done because not all of them are willing to tell their lecturers the problems they are facing in class. They may be embarrassed to express their weaknesses in front of their peers. Hence, GramCHQ allows the lecturers to assess their understanding of a certain topic based on the points they have collected after doing the exercises given. With such feedback, the lecturers may consult undergraduates who did not perform well and may plan other remedial activities should there be a need to do so. In addition to that, the lecturers would be able to identify from the spreadsheet and charts, grammar items which require more focus. Hence, saving time.

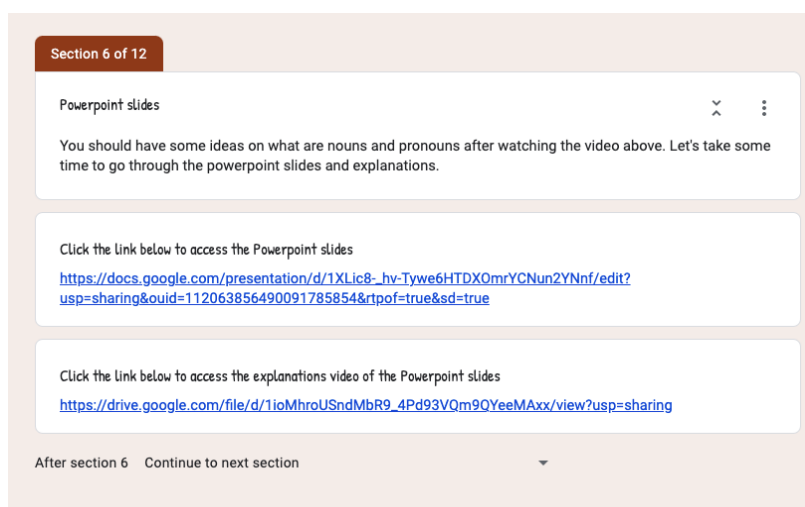


Figure 1. A sample for the notes menu - powerpoint slides



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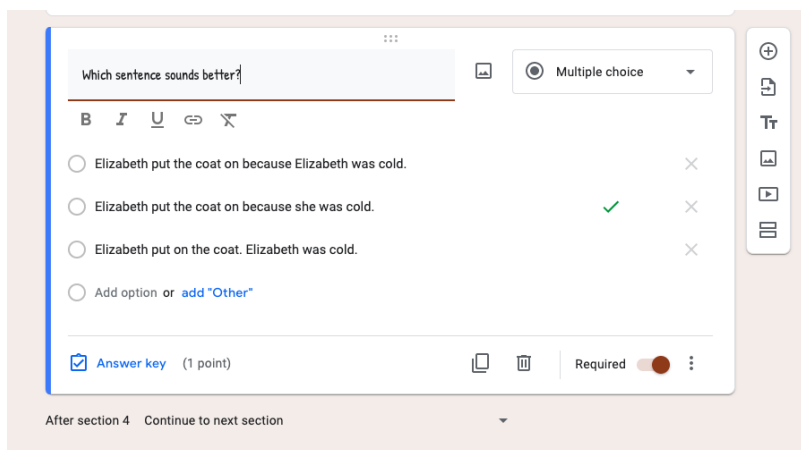


Figure 2. A sample for the exercises menu

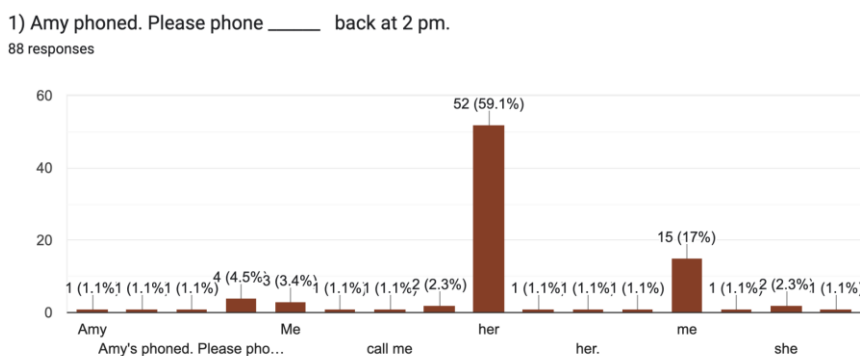


Figure 3. A sample for the feedback on bar chart

### 3.2 Research Design and Instrument

The study applied a quantitative research method in which the data were obtained through a set of e-questionnaire which was designed on Google Form based on the suitability to the administration of GramCHQ lessons in order to get the undergraduates' perception on the use of GramCHQ in ELC121 ODL lessons. The questionnaire comprises of two parts: Section A and Section B. Section A consists of the respondents' profiles (Full Name, Student ID, English Language Group which the Student is in) whereas Section B consists of the ten items (nine closed-ended questions and one open-ended question) relating to the respondents' feedback after going through GramCHQ lessons. The nine close ended questions were designed based on the five-point Likert Scale with '1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree'.

A reliability test was conducted to check the consistency of the evaluation measure item. Based on the internal reliability analysis, the evaluation measure was found to be highly reliable and consistent at Cronbach's alpha ( $\alpha$ ) value of 0.875 (more than the cut-off value of  $\alpha = 0.700$ ).

Inter-Item Correlation Analysis of the surveyed items were also performed to check the correlation between the items with one another. The findings in Table 1 showed that all the items correlated well with each other (0.3-0.9) (Hair et al., 2003). Thus, the surveyed questions are trusted and measurable to identify the respondents' evaluation on GramCHQ.

Table 1: Inter-Item Correlation Analysis of the Surveyed Items

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9
Item 1	1.000								
Item 2	.461*	1.000							
Item 3	.346*	.572*	1.000						
Item 4	.212	.508*	.686*	1.000					
Item 5	.143	.321*	.382*	.424*	1.000				
Item 6	.298	.419*	.540*	.409*	.633*	1.000			
Item 7	.425*	.639*	.661*	.563*	.350*	.401*	1.000		
Item 8	.459*	.479*	.472*	.469*	.285	.318*	.653*	1.000	
Item 9	.310*	.433*	.466*	.495*	.423*	.635*	.511*	.499*	1.000

\* Correlation is significant at .300 - .900 (Hair et al. (2003))

### 3.3 Participants

The participants of this study were 97 first year Diploma undergraduates in Universiti Teknologi Mara (UiTM), Samarahan, Sarawak. They were taking the first level English course - Integrated Language Skills (ELC121) which is compulsory for all UiTM undergraduates in the first year of the semester. The participants were from four different programs of study with two programs in Applied Sciences and Social Sciences respectively. The programs were in Applied Sciences (Applied Science), Diploma in Accountancy (Social Science), Diploma in Chemical Engineering (Applied Science) and Diploma in Administrative Science and Policy Studies (Social Science). All of them have undergone GramCHQ lessons and agreed to participate in the study by giving their responses via e-questionnaire.

### 3.4 Data Collection Procedures

Participants were informed regarding the survey prior to the GramCHQ lesson. They were informed that participation was voluntary and that they could withdraw from the study at any time without consequence.

Upon agreeing to participate, a link to the e-questionnaire was sent to the participants. They have to fill in the questionnaire every time after the GramCHQ lessons from October 2021 to January 2022.

The collected data were analysed through descriptive statistics (means, frequencies, percentages and standard deviations) by using the Statistical Package for Social Sciences (SPSS) Version 22 to identify the level of satisfaction among the respondents. Inferential statistics (Independent-Samples T-Test) was used to compare the mean scores of the satisfaction subscale between Applied Sciences and Social Sciences undergraduates in terms of their perception after using GramCHQ with the significance level set at a p-value of less than .05.

## **4.0 Data Analysis and Result**

### **4.1 Learner's Self-perceptions of GramChQ Usefulness**

The undergraduates' satisfaction level (based on the five-points Likert scale) after using GramCHQ was analyzed for the mean scores and the scores were compared to Landell (1997) for the level of satisfaction as shown in Table 2. According to Landell (1997), there are three levels of satisfaction, namely low satisfaction level (mean 1.00-2.39), medium satisfaction level (mean 2.40-3.79) and high satisfaction level (mean 3.80-5.00).

Table 2: Mean Scores of Satisfaction Level

Level of satisfaction	Range of Mean Scores
Low	1.00-2.39
Medium	2.40-3.79
High	3.80-5.00

Source: Landell (1997)

The present study found that the undergraduates perceived GramCHQ as a useful teaching tool with the overall mean score of 4.12, as shown in Table 3. The finding concluded that all the undergraduates in the present study were highly satisfied with the lessons conducted with GramCHQ.

Table 3: Overall Mean Scores of Undergraduates’ Self-Perception of GramCHQ’s Usefulness

Item	Mean
I was interested in this lesson BEFORE we started to study it.	3.73
I was interested in this lesson AFTER having studied it.	4.20
I think this lesson was interesting and relevant.	4.16
I liked how this lesson was presented.	4.27
The use of technology helped me to learn	4.16
Technology was a useful and important part of this lesson.	4.17
I enjoyed this lesson.	4.32
I will remember what I learned in this lesson.	4.01
I want future lessons to be conducted in this way.	4.10
Overall Mean Scores of Learners’ Satisfaction Level after Using GramCHQ	4.12

A closer analysis on the undergraduates’ self- perceptions of GramCHQ can be grouped into seven themes (Table 4). Table 4 depicted that enjoyment ranked the highest (m=4.32), followed by presentation (m=4.27), technology (m=4.17), relevance (m=4.16), future demand (m=4.10), memorization (m=4.01) and interest (m=3.97).

Table 4: Undergraduates’ Self-Perceptions on GramCHQ (By Themes)

Learners’ Self-Perceptions (By Themes)	Mean	Level
Interest	3.97	High
Relevance	4.16	High
Presentation	4.27	High
Technology	4.17	High
Enjoyment	4.32	High
Memorization	4.01	High
Future Demand	4.10	High

## 4.2 Significant Difference between Applied Sciences and Social Sciences undergraduates in Terms of Their Perception after Using GramCHQ

Table 5 presented the t-Test results for undergraduates’ perception and program of study. Overall, Table 4 exhibited that Applied Sciences undergraduates showed higher perception on GramCHQ lesson as compared to Social Sciences undergraduates in all the seven themes analysed, namely ‘Interest’ (AS= 4.041, SS=3.702), ‘Relevance’ (AS=4.351, SS=4.193), ‘Presentation’ (AS=4.432, SS=4.158), ‘Technology’ (AS=4.216, SS=4.132), ‘Enjoyment’ (AS=4.486, SS=4.211), ‘Memorisation’ (AS=4.027, SS=4.000) and ‘Future Demand’ (AS=4.243, SS=4.000).

Among the seven themes analysed, only two themes showed a statistical difference between Applied Sciences and Social Sciences undergraduates. As shown in Table 5, for the theme of interest,  $P(T \leq t)$  two tail (0.035) gives the probability that the absolute value of the t-Statistic (2.146) would be observed that is larger in absolute value than the Critical t value (1.987). Since the p – value is less than the alpha value of 0.05, the null hypothesis that there is no significant difference in the means of Applied Sciences and Social Sciences undergraduates is rejected. As illustrated in Table 5, undergraduates from Applied Sciences ( $m= 4.041$ ,  $SD= 0.660$ ) had better ‘interest’ in GramCHQ as compared to undergraduates from Social Sciences ( $m=3.702$ ,  $SD=0.865$ ).

Similarly, for the theme of presentation, using the degree of freedom value as 77 and a 5% level of significance, a look at the t-value distribution table gives a value of 2.007. Comparing this value against the Critical t value of 1.991 indicates that the t-value is greater than the Critical t value at a significance level of 5%. Therefore, the null hypothesis that there is no difference between the means of Applied Sciences and Social Sciences undergraduates is rejected (Table 5). Table 5 showed that in terms of ‘presentation’ of GramCHQ, Applied Sciences undergraduates ( $m=4.432$ ,  $SD= 0.647$ ) had better perception as compared to Social Sciences undergraduates ( $m=4.158$ ,  $SD=0.649$ ).

Table 5. t-Test Results for Undergraduates’ Perception and Program of Study

Undergraduates’ Perception (By Themes)	Mean	St. Dev	Variance	t-test for Equality of Means			
				P(T<=t) two-tail	t Stat	t Critical two-tail	df
Interest	4.041(AS)	0.660	0.436	0.035*	2.146	1.987	89
	3.702(SS)	0.865	0.749				
Relevance	4.351(AS)	0.633	0.401	0.233	1.201	1.992	75
	4.193 (SS)	4.193	0.373				

Presentation	4.432(AS) 4.158 (SS)	0.647 0.649	0.419 0.421	0.0482*	2.007	1.991	77
Technology	4.216(AS) 4.132 (SS)	0.651 0.665	0.424 0.442	0.543	0.610	1.991	78
Enjoyment	4.486(AS) 4.211 (SS)	0.651 0.674	0.423 0.455	0.0512	1.980	1.990	79
Memorisation	4.027(AS) 4.000 (SS)	0.600 0.707	0.360 0.500	0.843	0.199	1.988	85
Future Demand	4.243(AS) 4.000 (SS)	1.011 0.732	1.023 0.536	0.211	1.264	2.000	60

\*P<0.05, AS=Applied Sciences, SS=Social Sciences

As demonstrated in Table 6, a deeper analysis on the theme of ‘interest’ in GramCHQ lessons showed that there is a statistical difference in terms of ‘Interest in the lesson after GramCHQ’ ( $t=0.000429$ ,  $df=87$ ,  $p<0.05$ ) between Applied Sciences and Social Sciences undergraduates. Table 5 depicted that more Applied Sciences undergraduates ( $m=4.297$ ,  $SD=0.702$ ) were interested in the lesson after GramCHQ as compared to Social Sciences undergraduates ( $m=3.702$ ,  $SD=0.865$ ). In addition, the Applied Sciences undergraduates showed more interest in the lesson after GramChQ ( $m=4.297$ ) as compared to before GramCHQ ( $m=3.784$ ).

Table 6. t-Test Results for Applied Sciences and Social Sciences Undergraduates in Terms of Interest on GramCHQ Lesson

Interest in GramCHQ Lesson	Mean	St. Dev	Variance	t-test for Equality of Means			
				P(T<=t) two-tail	t Stat	t Critical two-tail	df
Interested in the lesson before Gram-CHQ	3.784(AS) 3.702 (SS)	0.817 0.919	0.674 0.749	0.644	0.463	1.990	79
Interested in the lesson after GramCHQ	4.297(AS) 3.702 (SS)	0.702 0.865	0.492 0.749	0.000429*	3.662	1.988	87

\*P<0.05, AS=Applied Sciences, SS=Social Sciences

In terms of ‘use of technology on GramCHQ lessons’, a deeper analysis in the theme showed that there is no statistical difference between Applied Sciences and Social Sciences undergraduates (Table 7).

Table 7. t-Test Results for Applied Sciences and Social Sciences Undergraduates in terms of Technology on GramCHQ Lesson

Use of Technology on GramCHQ Lesson	Mean	St. Dev	Variance	t-test for Equality of Means			
				P(T<=t) two-tail	t Stat	t Critical two-tail	df
Use of technology helps to learn	4.216(AS)	0.712	0.508	0.547	0.606	1.990	80
	4.123 (SS)	0.758	0.574				
Technology is useful and important in the lesson	4.216(AS)	0.787	0.619	0.630	0.485	1.996	67
	4.140 (SS)	0.667	0.444				

\*P<0.05, AS=Applied Sciences, SS=Social Sciences

In general, findings in this study showed that undergraduates from Applied Sciences had better perception on GramCHQ lessons in all the seven themes, namely, ‘Interest’, ‘Relevance’, ‘Presentation’, ‘Technology’, ‘Enjoyment’, ‘Memorisation’ and ‘Future Demand’. On the other hand, in terms of statistical difference between Applied Sciences and Social Sciences undergraduates, only the themes of ‘interest’ and ‘presentation’ showed significant differences.

## 5.0 Discussion

This study found that the undergraduates’ self-perception on GramCHQ was relatively positive (m=4.12). This finding is similar to most literature whereby undergraduates are satisfied with the use of game-based technological methods in the presentation of English lessons in teaching either one or all of the four major skills- Listening, Speaking, Reading and Writing (Alhabbash, et al.,2016; Elshami, 2021). For instance, Alhabbash, et al. (2016) had similar findings whereby their study found that undergraduates showed a good satisfaction toward the Intelligent Tutoring System in helping undergraduates to learn grammar easily and smoothly by adapting with undergraduates’ individual differences. However, the reverse of this finding was found in a study done by Elshami (2021) which revealed that the overall satisfaction among undergraduates with online learning during the new norm was only 41.3%.

When analysed deeper among the seven themes in this study, it was found that the element of ‘enjoyment’ in GramCHQ ranked the highest (m=4.32). This finding is supported by Dina (2021) in her study that 65% of the undergraduates enjoyed using google form in the teaching of reading skills at Sman 1 Sambit during the pandemic era. In addition, the finding is also substantiated by Pitura and Chmielarz (2017) who identified educational and emotional gains from the undergraduates when the element of gamification was applied to an extracurricular Content and Language Integrated Learning (CLIL) project in an upper-

secondary school in Poland, suggesting the motivational effect of gamified extracurricular CLIL activities. In a similar vein, Stevens et al. (2020) also found that teaching grammar with technology achieved better learning outcomes in terms of undergraduates' enjoyment (enjoy the lesson) and memorisation (can remember things learnt in the lesson). However, it is worth to note that the finding on the theme 'memorisation' in Stevens et al's (2020) study is slightly in contrast with the finding in the present study whereby 'memorization' is ranked the second lowest ( $m=4.01$ ) among the seven themes analysed even though it is still considered to be of a high satisfaction level.

On the other hand, even though the theme of 'interest' still fell in the category of high satisfaction, it ranked the least ( $m=3.97$ ) among the seven themes in the present study. Similar result was also found by Cam and Tran (2017) who found that among 25 freshmen in class 16DTA3 at Dong Nai Technology University, 44% of the undergraduates mentioned that they could understand the lesson better through games, most undergraduates (64% strongly agree, 24% agree) like the idea of teaching through games and nearly 83.3% of undergraduates feel excited with the lesson. The results showed that undergraduates enjoy the non-stressful learning atmosphere and are highly motivated. Similarly, Cabrera's et al. (2018) study on the use of Pixton in teaching grammar and vocabulary in a public high school in the South region of Ecuador indicated that Pixton is effective in motivating undergraduates (74.23%) to learn grammar and vocabulary in an enjoyable way; is useful (54.97%) and highly productive (13.90%) for improving vocabulary as undergraduates improved in their post-test scores in the experimental group. This shows that the undergraduates' interest in grammar lessons is sparked in a game-based teaching and learning environment. As illustrated in Table 4, undergraduates from Applied Sciences had better 'interest' ( $m= 4.041$ ,  $SD= 0.660$ ) and 'presentation' ( $m=4.432$ ,  $SD= 0.647$ ) in GramCHQ as compared to undergraduates from Social Sciences (interest:  $m=3.702$ ,  $SD=0.865$ ,  $m=4.158$ ,  $SD=0.649$ ). To date, there is no literature to support the findings and hence more research into this aspect is needed.

Besides, the present study also revealed that Applied Sciences undergraduates showed more interest in the lesson after GramCHQ ( $m=4.297$ ) as compared to before GramCHQ ( $m=3.784$ ). The finding revealed that GramCHQ has actually motivated undergraduates to learn grammar and to participate in the lesson. This 'motivating' element was also identified by Cabrera et al. (2018) whereby most of the undergraduates rated the use of comic strips as original (50.31%), motivating (59.76%), or useful (71.67%) and majority (85.06%) agreed that they would like their teachers to continue using comic strips in class.

On another note, the findings from this study in which both Applied Sciences and Social Sciences undergraduates showed high level of satisfaction ( $m=1.47$ ) on the use of technology in GramCHQ lesson and that there is no statistical difference in the perception between these two groups of learners ( $p=0.543$ ) proved the importance of technology GramCHQ. The findings coincided with Al Wasy's (2020) meta-



analysis study on the overall effects of the integration of technology into writing skills whereby it was found that technology has a large effect on second or foreign language writing.

Moreover, in GramCHQ lessons, technology was used both as the teaching aid and learning tool; and the findings from this study indicated that undergraduates from both Applied Sciences and Social Sciences showed no significant differences in terms of their perception of their satisfaction on ‘the use of technology helps them to learn’ ( $p=0.547$ ) and ‘technology is useful and important in the lesson’ ( $p=0.630$ ). The findings on the benefits of technology in teaching and learning in the present study is substantiated by findings from many researchers (Chambers et al., 2008; Edwards & Roblyer, 2000; Lee, 2000; Ross et al., 2010; Savage et al., 2013; Taylor & Gitsaki, 2004; Volman & Van Eck, 2001) who documented the obvious advantages of applying technology in education. The finding is similar to Ross et al.’s (2010) findings that technology is used as a teaching aid in the classroom with the usage of multiple media, including video segments, interactive exercises and multimedia presentations to enhance teacher-led instruction; and the use of technology as a learning tool enhances students' learning. In addition, the findings on the learners’ satisfaction in terms of the ‘helpfulness’, ‘usefulness’ and ‘importance’ of technology in learning bore similar findings with various researchers. For example, realistic problems can be introduced in the classroom, allowing students to “see the usefulness of what they are supposed to learn” (p. 615) (Volman and van Eck, 2001), increases learners’ motivation and enhances achievement (Lee, 2000), provides tailored-made feedback after assessing learners’ progress (Taylor & Gitsaki, 2004) as well as provides more learner-directed learning in terms of information accessing for problem solving and topic of interests (Edwards and Roblyer, 2000). In short, employing technology in the lesson is one of the vital instructional strategies in 21st Century Education (Arkorful and Abaidoo, 2015).

## **6.0 Conclusion**

This study on the satisfaction in using GramCHQ for Online Distance Learning during COVID-19 pandemic among first year Diploma undergraduates in UiTM Sarawak showed that they have positive perceptions on the use of GramCHQ in teaching grammar. The T-test analysis also portrayed that generally the Applied Sciences undergraduates showed higher perception on GramCHQ lessons as compared to Social Sciences undergraduates in all the seven themes analysed. Among the seven themes analysed, only the themes of ‘interest’ and ‘presentation’ showed a statistical difference between Applied Sciences and Social Sciences undergraduates.

The findings from this study serve as a guide for educators to conduct effective Online Distance Learning in teaching grammar. It also contains suggestions on how to use Google Form as a tool for language teaching. However, this study was only limited to the satisfaction level of the first year Diploma un-

dergraduates in Sarawak and the results cannot be generalised. Therefore, for future research, it is suggested that a bigger sample is used not only for the purpose of large-scale statistical inferences but also an extensive representation of the population. Moreover, the present study only utilised Google Form to design the grammar teaching tool for ODL lessons. Future researchers from the similar fields might consider other platforms in designing the teaching tools to investigate the effectiveness of the tools in enriching other language skills. Other than that, the present study elicited the participants' responses via the quantitative approach. In future, researchers from the similar fields might want to collect data through open-ended questions or interviews in which the respondents could yield more expressive and precise information.

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