VOCABULARY ACQUISITION USING DUOLINGO IN FRENCH LANGUAGE LEARNING: A MALAYSIAN CONTEXT

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ABSTRACT

Vocabulary can be considered as the foundation to develop overall target language proficiency. Having a rich vocabulary would mean better performance in the four language skills. However, general in-class activities are insufficient for effective vocabulary acquisition to occur. Limited vocabulary learned through in-class activities might halt the occurrence of effective language learning. With that in mind, this study aims to explore the use of Duolingo in acquiring vocabulary of French language. For this purpose, 21 students from Basic French 1 class in Universiti Kebangsaan Malaysia volunteered to use this app for 8 weeks. 3 instruments were used in collecting data: online interviews, tests and observations. The online interview was used to elicit the students' perception towards the app, whereas the tests were administered thrice to measure their performances in vocabulary acquisition. Observations were also carried out thrice to monitor their learning process. The findings reported that the students had positive perceptions towards Duolingo. They claimed it to be user-friendly, convenient, and entertaining. The tests results showed an improvement in terms of French vocabulary acquisition and it was found that Duolingo used multiple ways in presenting and teaching French vocabulary. This study showed that Duolingo can be used in building and developing French vocabulary outside the classroom walls. It is also beneficial in complementing French language classes to help students build their confidence in using the language. Further studies are also needed to investigate the usage of Duolingo in learning different aspects of language such as grammar or communication amongst learners of French in Malaysia.

Keywords: Duolingo; French as a Foreign Language; Vocabulary; Language Learning; Effective

INTRODUCTION

As the interest in foreign language learning grows, many nations across the globe have taken the action of encouraging its society to take on new languages. Malaysia, as a well-diversified country is also no exception (Zubairi and Sarudin, 2009). In Malaysia many learning institutions are offering foreign language courses. With these language classes, students have the opportunity to learn foreign languages in a formal classroom environment with the guidance of professional language teachers. This way, students would be able to equip themselves with an additional language upon their graduation. In learning a language, vocabulary can be considered as a solid bedrock to build the overall target language proficiency (Moeller, Ketsman & Masmaliyeva, 2009). By having a rich vocabulary, learners are able to perform better in the four language skills (Ghalebi et al, 2020; Moody et al, 2018).

In this 21st century, the integration of technology in almost every field including education in general is inevitable (Gafni, Achituv & Rahmani, 2017). With so many technologies being introduced every single day, students are given the vast options of selecting suitable digital tools to be used in their learning process. One of the most commonly used technology in this era would be mobile devices. The utilization of mobile devices in foreign language learning to support the learning process is not something new (Saran, Seferoglu & Cagıltay, 2009). This approach is referred as Mobile-Assisted Language Learning or MALL (Kukulsca & Shield 2008). Generally, mobile devices can be equipped with various applications that are accessible online to facilitate foreign language learning (Munday, 2016). In fact, online mobile applications have been used extensively as tablets and smartphones are always available most of the time (Ahmed, 2016). Such examples of applications that are designed specifically for foreign language learning purposes are Babbel, Memrise and Duolingo. With these apps, learners are able to gain input from outside of classroom environment as well as being encouraged to learn independently.

With that in mind, this research would like to look into Duolingo, in acquiring a vocabulary of a foreign language which is French.

REVIEW OF LITERATURE

Mobile-Assisted Language Learning refers to the utilization of mobile devices to support language learning (Kukulsca & Shield, 2008). It is a subdivision of M-Learning and Computer-Assisted Language Learning (CALL). MALL differs from CALL in terms of the device being used. While CALL is limited to computers only, MALL specifically focuses on portable devices such as smartphones, tablets or MP3 player (Kukulska-Hulme, 2009). The implementation of mobile technology in teaching and learning foreign languages has proven to be extremely beneficial. This was shown through several studies from previous researchers including teaching and practicing vocabulary (Lu, 2008), practicing idioms (Thornton & Houser, 2005), and practicing target language pronunciation (Ducate and Lomicka, 2009).

According to Kukulska-Hulme (2009), learners had shown positive attitudes towards the application of MALL devices in language learning. Apart from promoting interactivity, collaboration and engagement in various learning activities, it also gives learners the opportunity of personalizing their own learning without the restriction of time and place. Therefore, creating a blended learning environment for learners which enables them to study according to their own pace. Another appealing aspect of using MALL is the easy access to resources anytime and anywhere when needed. However Hockly (2013) argued that technology is not the one that enhances teaching and learning, but rather the usage of it in those processes.

Duolingo was created in 2011 by Luis Von Ahn and Severin Hacker (Munday, 2016). With the slogan "Free Language Education for The World", this app has 200 million registered users across the globe, learning various kinds of languages. It is free to download using smartphone through Google Play Store for Android users, and App Store for IOS users (Nushi & Eqbali 2017). At the moment, the app is only functional with the presence of internet connection. Its main method of teaching is Direct Translation, which uses the learners first or source language to teach the target

language (Garcia 2013; Nushi & Eqbali 2017). Alongside translation, it also teaches vocabulary via visuals (Ahmed, 2016).

In mobile version, users are provided with the Lessons known as Tree. The Tree is the main content which contains the lessons that are divided into smaller sub-unit called skill (Isbell, et al., 2017). To demonstrate, when users begin a new skill, they would start at Level 0. To level up, users must complete a number of lessons given. The number of lessons vary for each level. The maximum level is Level 5. Whenever the users made mistakes, Duolingo would notify them and have them repeat the questions several times until they got it right. Apart from that, the gamification aspect of Duolingo creates a competitive environment which motivates the users to keep on learning by collecting points (Finardi, Leao, & Amorim, 2016). This aspect of the app made it appealing and entertaining as it provides a gaming like experience in the learning process (Munday, 2016).

Figure 1: Main interface of Duolingo

Source: Duolingo App (2021)

Studies had been carried out in identifying the impacts that Duolingo brings into language learning. Results showed that it had significant effects on students' process of learning languages. To begin with, Duolingo has proven to be an assistance in learning language effectively (Ahmed 2016). To support this, Ahmed revealed that the app helped in improving knowledge regarding a language, such as vocabulary, grammar and pronunciation. Guaqueta & Castro-Garces (2018) who utilized Duolingo as a didactic tool for EFL vocabulary building in their studies, also shared similar results. They found that Duolingo assisted in improving and expanding the students' vocabulary of English

Language. Finardi, Leao & Amorim (2016) who studied the affordances and drawbacks of Duolingo, were correspondingly in agreement with both past studies as they suggested that the app promotes vocabulary and grammar development.

Additionally, Munday (2016) suggested Duolingo could be considered as a possible complement to any language course since the app enabled learners to review the language according to their own level. Furthermore, the utilization of Duolingo could enrich leaners' classroom experience by providing them a flexible learning outside the classroom. Also, both Munday and Ahmed (2016) mentioned that this app is more suitable for beginners in language learning. Ahmed reasoned that this is because the app is able to motivate learners to keep progressing.

Despite the positive feedbacks, Duolingo still has its limitations. Ahmed (2016) stated that the app still requires improvement in terms of covering more vocabulary, grammar and languages. She added that, this is particularly referring to English Language since it is the lingua franca of the world. Another drawback that was highlighted is the method used by Duolingo in teaching language, which is Direct-Translation. Although students might use it for extra practice, but the approach and principle used by Duolingo might collide with the current teaching approaches like Task-based Language Teaching or Communicative Language Teaching. They might have to face negative consequences such as having different translations or interpretations given by Duolingo and by the teacher in the classroom (Nushi & Eqbali, 2017). Additionally, Finardi, Leao & Amorim (2016) pointed out that, although Duolingo could aid in strengthening the lexical and structural aspects of a language, the app is lacking in terms of developing other aspects such as oral interaction or communication. In fact, MALL program developers such as those of Duolingo should consider aiming for instructional formats to feature some degree of meaningful context and communication (Isbell, Rawal & Loewen, 2017).

The theory that would be used in this study is Comprehensible Input hypothesis, founded by Stephen Krashen in the 1980s. In this theory, Krashen explained that learners acquire language by receiving and understanding comprehensible input. 'Comprehensible input' here would be the target language that cannot be produced by the learners, but could still be understood, provided that the input is presented with suitable choices of words, explanations or visual cues.

In the case of using Duolingo, the app would act as a tool in producing the input. Duolingo teaches vocabulary and grammar primarily through translation. To illustrate, when learners are introduced to a new word, Duolingo would require them to translate the word into their first language. As learners do so, the translation become a comprehensible input because they understand what the new word means in their first language. Additionally, Duolingo also provides exercises that requires learners to match new words with suitable images or translations, which would also become input that is understandable by learners. Although the target language learned is really foreign for beginners, the application of translation along with other exercises provided by Duolingo would facilitate learners in comprehending the new vocabulary of the target language.

As discussed above, previous studies have shown how MALL and Duolingo are advantageous in language teaching and learning. However, in the Malaysian context, we find that this learning tool is relatively unknown to the teachers and learners of French in Malaysia. Thus, this exploratory study was carried out to provide answers to the following research questions:

i. What are the learners' perceptions towards the usage of Duolingo in language learning?
ii. Is there any improvement in vocabulary acquisition after using Duolingo?
iii. How does Duolingo facilitate learners in vocabulary acquisition of French Language?

RESEARCH METHODOLOGY

The research design for this study was adapted from a case study by Ahmed (2016) which also focused on the utilization of Duolingo in learning languages. Similar instruments and procedures in Ahmed study were utilized but some modifications were made to suit this study. The study took place in Universiti Kebangsaan Malaysia (UKM), one of the public universities in Malaysia. It was also carried out outside class hours to avoid disturbing the participants' tight schedules.

This study used 3 different data collecting tools alongside Duolingo, which were observation, test and online interview. It involved a group of 21 participants who used the app to learn French for 8 weeks. During that period, they participated in 3 tests, with the purpose of evaluating their progress in acquiring French vocabulary. The scores from those tests were presenting the quantitative data. Additionally, the participants were also observed while using Duolingo and underwent an online interview session at the end of the study. The observation process was to see how the app assisted the subjects in learning French vocabulary, whereas the online interview was to address their perceptions and attitudes towards Duolingo. Both of these data represented the qualitative part of the study.

Before the study began, the researcher had taken the time to meet all level 1 students in the class and briefed them about the research and informed them about the criteria of the target participants. During this introductory meeting, a simple questionnaire, which was constructed beforehand, was distributed to the students. This was carried out to collect their background information and to test their knowledge of French language. Students who were interested, were welcomed to join the study.

The participants were gathered through purposive sampling technique. We selected the target participants who were students in Basic French 1 course. This was due to the fact that they were all beginners and had no previous experience in learning the language. Additionally, they were also required to have a minimum of Band 3 in Malaysian University English Test (MUET). According to the MUET performance descriptor, Band 3 users are modest users who are fairly fluent and have fairly appropriate use of the language. This was mandatory because the participants were going to learn French on Duolingo using English as the medium of instruction. Apart from that, the participants must also be able to work with the researcher for a period of 8 weeks and be prepared to cooperate outside class hours.

After a week, out of 60 students registered in level 1, a total of 21 students had voluntarily committed themselves to take part in the research. They had agreed to be interviewed, to answer tests administered to them and if at any moment they felt uncomfortable about becoming a participant, they could withdraw at any time.

This study used 4 instruments in order to conduct the research. The instruments were Duolingo, Online Interview, Test, and Observation.

Duolingo

In this study, the participants were required to complete 8 skills which were Basics 1, Basics 2, Greetings, People, People 2, Travel, Family, and Activities. For each skill, they were given the choice of completing all levels until they reach the maximum Level 5, or remain on a specific level and complete the daily exercises given.

The participants were instructed to use the app every day for a minimum of 5 minutes, but they were allowed to go beyond the required study time according to their own preferences. Furthermore, they may continue working on other skills if they have completed the required 8 skills. To demonstrate, after installing the app, the participants selected courses for English speakers and then proceeded to select French Course as demonstrated in Figure 2.

Figure 2: The Selection of Language Course
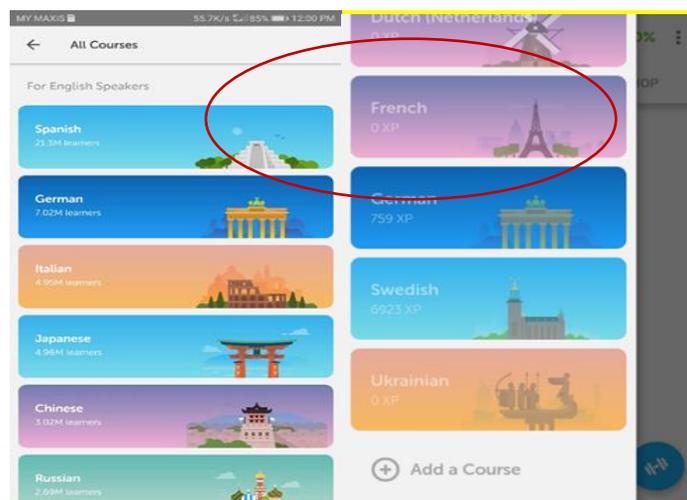
Figure 3: Optional Placement Test
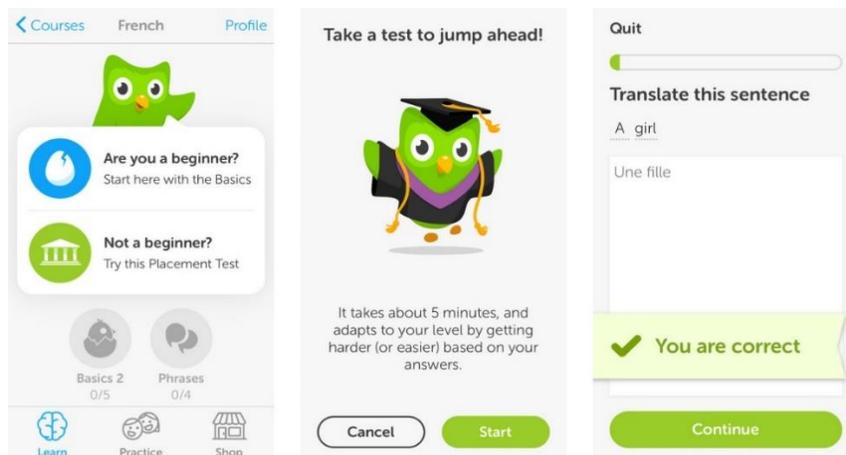
Afterwards, the participants were ready to begin their Duolingo lessons and activities. Figure 4 illustrates the 8 skills that the participants were instructed to complete. In these skills, the students were introduced to nouns, verbs, adjectives and the vocabulary associated with each skill. They were given the freedom to learn according to their preferences. They can either complete all skills until they reached the maximum level of Level 5, or keep it at a minimum of Level 1.

Figure 4: The required 8 skills needed to be learned
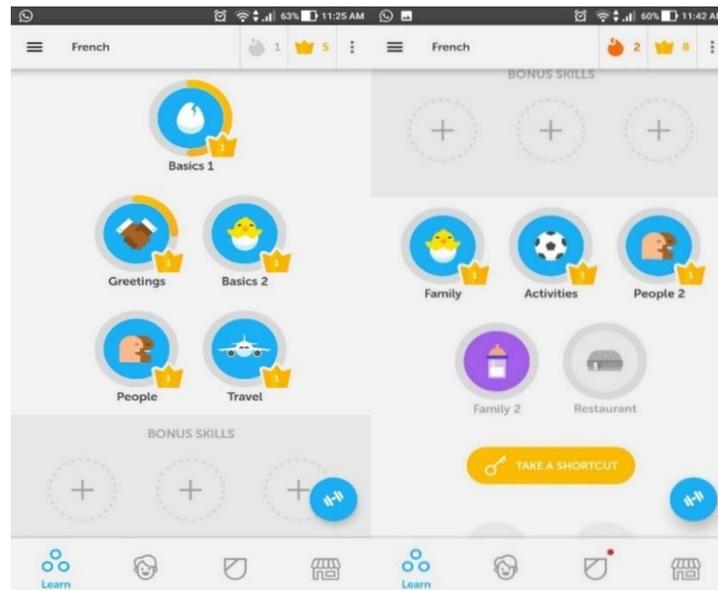
Online Interview

This instrument was used to answer the study's first research question; *What are the learners' perceptions towards the usage of Duolingo in language learning?* It was employed to elicit the participants' experiences and perceptions after using Duolingo for 8 weeks. The online interview was semi-structured, and had a total of 11 open-ended questions prepared before the interview took place. The questions were adapted from Ahmed's (2016) case study which originally had 5 open-ended questions. But the questions were modified to suit this study, and, an additional 6 more questions were added to the list. The online interview was carried out during the 8th week of the study after all participants finished their 3rd test. The interview was conducted online via WhatsApp Messenger. Because the participants submitted their responses in written form via WhatsApp, the researcher only had to copy paste the written responses for data analysis, instead of transcribing them manually, which was time-saving. The sample of the online interview questions can be found in Appendix.

Test

The third instrument were tests that were utilized to answer the second research question; *Is there any improvement in vocabulary acquisition after using Duolingo?* The purpose of the test was to evaluate the subjects' progress in French Language, particularly vocabulary acquisition. In this study, the participants were subjected to 3 tests during the duration of 8 weeks of using Duolingo. The tests were constructed by the researcher and was approved and validated by the French Lecturer of Basic 1 French Language course. The participants took their tests manually at the UKM library, according to the set date and time with the presence of the researcher. This was to avoid any cheating issues that might occur should the tests be held online.

Test 1 was taken in Week 2. This test was a basic-level test that was administered to assess the participants' knowledge after 2 weeks of using Duolingo to learn French. The topics covered in this test are Basics 1, Basics 2 & Greetings. There were 20 picture recognition items in this test that tested on Nouns and Verbs. The allocated marks were 20.

Subsequently Test 2 was conducted in Week 4, and finally Test 3 in Week 8. Test 2 and Test 3 were identical to estimate the participants' performance accurately. These tests were administered to the subjects to observe whether there were any significant differences in their progress while learning French using Duolingo for the period of 8 weeks. The construct and content of all 3 tests were based on the 8 skills that the participants were required to complete in Duolingo. The topics covered in both tests were Basics 1, Basics 2, Greetings, People, Travel, Family, Activities and People 2. Similar to Test 1, Test 2 and Test 3 also had 20 picture recognition items which tested the subjects on Nouns and Verbs, and the allocated marks were 20. The sample of Test 1, Test 2 and Test 3 can be found in Appendix.

Observation

Observation was used to answer the study's third research question; *How does Duolingo facilitate learners in vocabulary acquisition of French Language?* The purpose of this instrument was to monitor the subjects' learning process while using the app. During the 8-week period study, observation process occurred after the completion of each Test, in Week 2, Week 4 and Week 8. However, not all participants were present in each session because most of them had to leave right after they completed their tests due to their tight schedules. Hence, every session had different number of participants undergoing the observation process. The observation was conducted outside class hours and after the participants had completed their test. To demonstrate, after completing Test 1, they were asked to use Duolingo for 5 minutes. The participants were observed and important notes were recorded during the process. Similar procedures were repeated after the participants had completed their Test 2 and Test 3.

Data Collection Procedure

A WhatsApp group was created to ease communication between the researcher and the participants for the period of 8 weeks. Furthermore, the participants came from different faculties and this

made it difficult for both parties to meet. Hence, the convenience of an instant messenger was used to continuously connect with the participants.

Before the study began, a detailed briefing about the procedures of the research was held with the participants. The dates of the tests and observation process, which occurred in Week 2, Week 4 and Week 8 were also discussed during the meeting. Since all 21 participants were unable to agree on one specific date for each week, it was decided that they will be given 2 optional dates in each of those weeks. They were allowed to attend any date which was feasible to them. Next, the researcher proceeded with instructing all participants to install Duolingo app in their smartphones. It was crucial for the researcher to ensure that the participants were installing the right version of the app and that the app was working properly in their mobile devices. Later they were given the following instructions;

i.   Use the app for a minimum of 5 minutes or complete 1 to 2 exercises daily. However, after completing the required study time, the subjects were free to use Duolingo to study, according to their personal preferences.
ii.   Complete the 8 required skills which are Basics 1, Basics 2, Greetings, People, Travel, Family, Activities and People 2. They were given the choice of getting all the skills to Level 1 or max it out to Level 5. Furthermore, they may proceed to other skills after completing the 8 skills.

In order to ensure that the participants were using Duolingo every day, they received a daily reminder to use the app, through the WhatsApp group that was created earlier. This way, participants were notified that they have to complete their Duolingo task. Week 1 began right after the briefing was done. The participants started to use Duolingo for 2 weeks.

In Week 2, Test 1 was administered to the participants at Tun Sri Lanang Library, UKM, with the researcher's presence. For Test 1, they were given 2 different dates and were allowed to attend either one that was convenient to them. Each participant was given an hour to complete the test. Next, the researcher requested any participants that were available afterwards to stay for the next procedure, which is the observation. During the observation process, each participant was instructed to use Duolingo for 5 minutes. Notes were also taken during the process. After the completion of Test 1, the participants continued using Duolingo for 2 weeks and then attended their Test 2 in Week 4. Similar to Test 1, the test was taken manually with the researcher, at the library. Two different dates were given for the participants to choose according to their conveniences. Then, the same procedures for observation process were repeated with available participants for the second time after Test 2 was completed.

The participants continued using Duolingo for the following 3 weeks. During that period, they were continuously reminded to use the app every day through the WhatsApp group. In Week 8, participants attended their Test 3. Similar to previous tests, Test 3 also took place at the same venue and were held twice for the convenience of the participants. Final observation session was conducted with the participants that were available at the time. Additionally, the online interview also occurred in Week 8. In the online interview, a list containing 11 questions was sent to the WhatsApp group. The participants were given 2 weeks to submit their answers in written form. Furthermore, they were given the options of submitting the answers via WhatsApp or email their responses to the researcher.

RESEARCH FINDINGS

Online Interview

All 21 participants responded that they had positive experience with Duolingo. Generally, they claimed that it is a convenient, user-friendly, and entertaining language learning app. According to the participants' responses, Duolingo also taught them many things including the four language skills, grammar, pronunciation and mainly vocabulary. The participants responded they would recommend the app to others since it did not require them to pay anything to use the app. Furthermore, the participants stated that Duolingo's teaching method helped their language learning via translation, visuals, categorization and repetitiveness aspects in the exercises provided.

Additionally, the participants mentioned that Duolingo did helped improve their learning in French class due to the similarities in the syllabus. The words they learned in Duolingo were similar to those learned in class; which was the reason why it can also be used as a revision tool. Therefore, the participants found the app boosted their confidence as when they already learned something through Duolingo and then learned it again in class, they already know what it was.

However, despite all the positive feedbacks given, 16 of the participants agreed that they would not rely solely on Duolingo to learn French or other languages as a role of a teacher is still needed. They will find other ways to learn French aside from using Duolingo and French class such as YouTube to learn other aspects of language that the app did not teach them. Two participants proposed that Duolingo should provide an online teacher to help them as there were limited responses and feedbacks in the app when clarifying certain things. The rest of the participants mainly suggested the app to add more visuals, contents, and improve their teaching method.

Test

For Test 1, the average score obtained by the participants was 18. The highest score obtained was a full mark of 20, whereas the lowest score was 10. Since the first test was basic, it was necessary to conduct another test that is Test 2, which tested the participants on the overall 8 skills.

Test 3 which is similar as Test 2, was administered at the end of the study to examine their progress and observe whether there were any significant changes in their performances in the past 8 weeks. Based on the results shown above, the average mark obtained by the participants in Test 2 was 15. 6 participants scored this mark in Test 2. In addition, the highest mark recorded was 19 obtained by only 1 participant, whereas the lowest mark attained was 12, scored by 4 participants.

However, in Test 3, the average mark increased to 17 and this mark was obtained by 5 participants. Furthermore, 1 participant managed to score 20 marks in Test 3 and it was the highest recorded mark, whereas another participant scored 11, which was the lowest mark recorded for this test. Based on these numbers, it was evident that there is definitely a significant improvement in the participants tests' scores which means that they have developed their vocabulary acquisition in the 8 weeks of learning French using Duolingo.

Table 1. Overall average, highest and lowest marks for test 1, 2 and 3
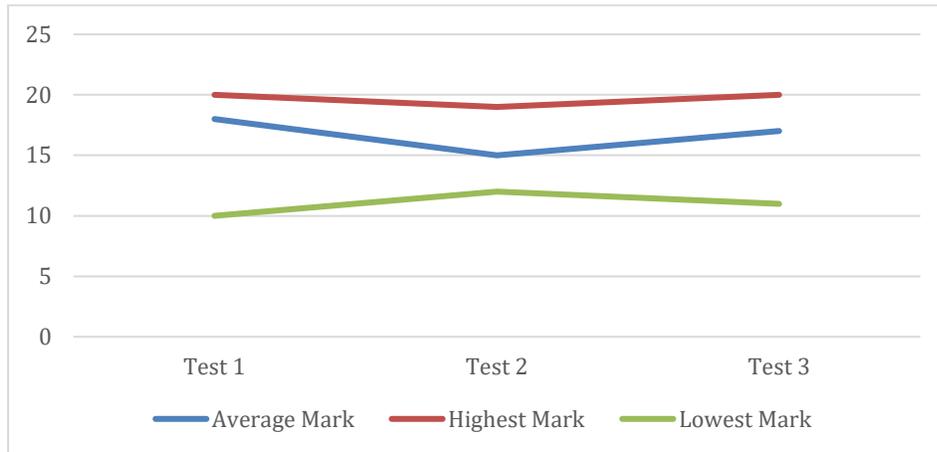
Observation Notes

Throughout the observation process, it was apparent that Duolingo's main method of teaching is translation. This method played a major role in not only teaching, but also helping the participants acquire French vocabulary. It assisted them in terms of learning the definitions of numerous French words. In Duolingo, most lessons require users to translate from the source language to target language, or vice versa. This is how learning occurs in Duolingo. However, the users are not left to search for the translations on their own. Duolingo provides a feature that enables users to translate right there and then.

To illustrate, questions involving translation would have the words to be underlined with dots. This means that users could click on any of the words and their translations would appear instantly. This type of questions is usually given in the introductory level or whenever new vocabulary are introduced in a certain skill. The translation feature is mainly used to learn abstract words that cannot be described using visuals. Aside from translation, Duolingo also uses visuals to teach vocabulary. This applied mostly to concrete words in categories such as Animals, Family, Transportation or Color.

In the case of defining vocabulary using graphics or images, it was obvious that the participants were able to acquire the vocabulary quicker. Either way, translation and visuals that were used by Duolingo, facilitated the participants in acquiring French vocabulary.

Besides translation and visuals, Duolingo employed categorization. They grouped certain vocabulary and taught them by category. Some of the categories include Travel, Animals, Family and Greetings. Similar to using visuals, this method also helped students acquire vocabulary quicker. They were able to recall words better when the words are associated to a certain group.

Additionally, reinforcement through repetitive exercises further helped strengthen the participants' understanding of the vocabulary. Some participants kept on repeating the same mistakes, yet they were able to get the correct answers after several times of practicing with the

app. Also, they utilized the Tips feature in Duolingo. Whenever they forgot the conjugation of verbs, gender of certain words, or want to learn additional information on a certain skill, they would refer to the notes that are available in the Tips section. Despite all the problems that the participants faced while learning French vocabulary, they were able to overcome them after much training via Duolingo.

DISCUSSION

Students' Perception towards Using Duolingo in Learning French

Generally, students that participated in this research had positive perception towards the usage of Duolingo in French Language learning. Duolingo is said to be user-friendly and convenient, which correlates with prior studies by Gafni, Achituv, & Rahmani (2017) and Munday (2016). According to Gafni, Achituv & Rahmani (2017), people are more willing to use an app if it is easy to operate. Duolingo is a very user-friendly app because it has a simple user interface and also provides tutorials for first-time users. Therefore, students are more likely to use it in their language learning. Besides that, students seemed to like the app because it is convenient. It can be accessed anytime and anywhere via mobile devices, provided that there is internet connection available (Munday, 2016). Because of this, Duolingo became appealing to students.

Furthermore, they mentioned Duolingo to be entertaining because it teaches language like a game. This finding is supported by previous studies by Munday (2016) and Gafni, Achituv & Rahmani (2017). Duolingo has a gamification feature which makes the whole learning experience similar to playing a game. Users will be rewarded with points of special item called Lingots every time they manage to complete lessons. This type of learning might have stimulated their learning process and made the lessons more entertaining. Besides that, Duolingo can be downloaded and used for free. As a student, being thrifty is important because they need money to buy other daily necessities. Therefore, finding an app that helps with language learning, and also free of charge is considered to be a bonus.

Despite the positive comments, Duolingo also has its own drawbacks reported by the students. For that reason, the participants in this study were asked for suggestions on how to improve the app. Some of the recommendations include providing an online tutor or teacher to assist those in need of more explanation. Duolingo is after all, a computerized app that has limited responses or feedback when it comes to clarifying certain things. Therefore, these students suggested that an online tutor would be helpful. This statement is in line with the findings from Finardi, Leao & Amorim (2016). They mentioned that most students would still prefer the blending of traditional classroom together with Duolingo because the app alone lacks oral-interaction. Moreover, they pointed out that the app cannot teach them the communicative aspect of language (Finardi, Leao & Amorim, 2016). Therefore, they would find other means of learning and improving their language skills. One of them even said that they still need a language teacher. This shows that the presence of a teacher is crucial in fostering the development of language entirely.

In addition, they also proposed Duolingo to incorporate more visualizations such as videos and photos, as to avoid getting bored with the lessons. In this 21st century, students are more

interested in images and graphics instead of just words. Hence the inclusion of visualizations in their learning would perhaps be better in engaging students and extend their attention span. Another important suggestion was regarding the content, to be specific, the vocabulary. The students demanded that the app add more words into one lesson. Duolingo does teach a minimal number of vocabularies in one lesson, probably to ensure that students would acquire a set of words before moving on to the next lesson with new vocabulary. But the repetitiveness in the lesson might have left the students feeling demotivated, thus, leading them to give such recommendation.

Improvement in Vocabulary Acquisition after Using Duolingo

Majority of the students in this study claimed that Duolingo had taught them many new words and this statement was supported and proven with their tests' results that displayed a significant improvement. In terms of language learning, Duolingo was reported to have taught the students various aspects of language. This includes vocabulary, grammar, pronunciation and also the four language skills which are reading, writing, listening and speaking. This result concurs with Ahmed (2016) findings. The students mentioned that Duolingo's way of providing many repetitive exercises and teaching by categorization and visualization helped with their learning. Perhaps the categorization and visualization method, followed by reinforcement through repetitive exercises, facilitated them in terms of comprehending and memorizing vocabulary, grammar rules and more.

Furthermore, the students agreed that using Duolingo helped improve their learning in French class. It could be due to the similarities between the syllabus of their French class and that of Duolingo's. For that reason, perhaps the app was helpful to be used as a revision tool for them, to practice the vocabulary they had learned in class, aside from teaching them additional things. When asked whether they would recommend the app, the students responded yes and would suggest the app to peers, friends and those interested in learning languages, to download Duolingo. This result coincides with the findings of Munday (2016), Ahmed (2016) and Botero & Questier (2016). According to them, the app is suitable for beginners especially in acquiring vocabulary of foreign languages. This statement also concurs with prior studies by Guaqueta & Castro-Garces(2018) and Finardi, Leao & Amorim (2016). Due to the methods utilized by Duolingo, students were able to comprehend the lessons and obtained good results in the tests given. This means that they were able to acquire French vocabulary through Duolingo. Even though they were already enrolled in a proper, formal French class, they claimed to have learned more words via Duolingo compared to in-class learning. Perhaps, the app provided more input in terms of new vocabulary, in contrast to the traditional classroom learning. Additionally, the students mentioned that Duolingo had similar content to their syllabus in French class. Hence, this app could help them with revising the vocabulary that they had learned in the past.

However, the students revealed that they would not be totally reliant on Duolingo alone in learning French, which is similar to the results found by Ahmed (2016). They reasoned that Duolingo might be a good app but only to a certain degree. Duolingo might have facilitated vocabulary acquisition, but it is believed to be insufficient for students to be competent in a language if the end goal was to achieve high proficiency or even achieving a native-like fluency.

Duolingo Facilitates Learners in Vocabulary Acquisition of French Language

According to the results, it was proven that Duolingo had facilitated the students' vocabulary acquisition process after 8 weeks of using it to learn French. It is believed that the methods employed by Duolingo in producing input during the lessons were the reason behind the app's effectiveness in teaching vocabulary. Duolingo mainly uses Direct-Translation in teaching languages as reported by Garcia (2012) and Nushi & Eqbali (2017). It utilizes the students' source language to teach the target language. The translation between these two languages then became input that are comprehensible by the students. In this study, the students had to use English to learn French because Duolingo does not provide language courses for Malay, Indian nor Mandarin speakers. But using English was not a problem because it was their second language. Although French is a foreign language and is uncommonly spoken in Malaysia, but its English translation made it possible and easier for the students to learn and understand. Alongside translation, the app also teaches by using visuals, categorization and heavy emphasis on repetition.

As mentioned by Krashen (1987) in the previous literature, comprehensible input refers to the target language that is unproducible by learners. However, the input could still be understood if it is presented using suitable choices of words, methods, explanations or visual cues. In this study, the majority of students who participated were mostly beginners in French language, thus, their present knowledge of the language is quite limited. Also, most French words are very new and foreign to them. But due to Duolingo's various methods of presenting and teaching the new input, including Direct-Translation, the French vocabulary become comprehensible to them. For example, Duolingo introduces the word *Bienvenue*. Duolingo then provides the translation in English, which is *Welcome*. Because of the English translation *Welcome*, students learned that *Bienvenue* means *Welcome* in French. They were able to comprehend the French word because Duolingo presented the word using a suitable method which is translation. Hence, helping the students acquire the French vocabulary.

Besides translation, Duolingo also uses visualization in teaching vocabulary. For example, they presented an image of a Dog with the French word *Chien*. The image of the Dog acted as a visual cue for the students. Consequently, they were able to comprehend that *Chien* is French for *Dog*. It was obvious that the participants were able to acquire the vocabulary quicker using this method. Besides that, the app also employed categorization. In Duolingo, certain vocabulary are grouped and presented in a category. For example, the words *Père, Mère, Frère* and *Sœur* would be grouped under the Family category. This way, students would remember that these words are related to Family. Similar to visualizations, words associated to a specific category might helped students acquire and recall them better.

Additionally, Duolingo provides many lessons and exercises. Students were given many exercises to use or practice the vocabulary that they had learned. So, this enhances their understanding of the vocabulary and teach them how to use it in different context. Finally, Duolingo puts a very heavy emphasis on repetitions. The lessons and exercises were repetitive, especially when students keep making mistakes or errors when answering the questions. Duolingo not only correct them but also make them repeat the questions multiple times. This is to correct them & further strengthen their understanding & memory. During the 8 weeks, students

encountered some problems while learning French using the app. This includes misinterpreting the words, and also misspelling them. But Duolingo did a good job at pointing and informing them their mistakes and then provided the correct answers. The app will repeat the questions multiple times until students were able to answer them correctly. In a way, this repetitiveness helped with students' understanding and memorization skill.

Although using Direct-Translation in teaching vocabulary is considered to be obsolete and have been a debatable and controversial approach in the field, the method seemed to have worked for the students in this study. When asked about it, the students of the research claimed it to be effective for them. It might not be efficient in teaching other aspects of language such as grammar but it worked for teaching vocabulary. Nushi, & Eqbali (2017) did argue that this method might collide with current teaching approaches being used, which are Task-based Language Teaching and Communicative Language Teaching. They claimed this method might bring negative consequences to the students as Duolingo's translations might be totally different with the translations given by the teacher in the classroom. But, the combination of different teaching methods does not necessarily be confusing for the students. Student A might find method 1 effective, but Student B might say otherwise. Therefore, there should not be any issues in using different teaching methods.

CONCLUSION

In conclusion, this study has proven that Duolingo was able to facilitate vocabulary acquisition in learning French language. It is an app that can be used by UKM Basic French 1 class students to further develop or build their vocabulary outside the classroom setting. Also, it can be adopted in French language class to provide students with a different kind of learning platform that is much more entertaining. Additionally, Duolingo could be considered by individuals who are beginners in French language learning as it facilitates the early stages of language learning which is vocabulary acquisition. It is not only user-friendly, but also free to download, convenient and entertaining.
However, although it could enrich the students' classroom learning experience as well as providing them with an entertaining platform to learn languages (Munday, 2016), it is of opinion that Duolingo should not be replacing any formal language class entirely. Duolingo should only be used as a complement in language learning, rather than totally depending on it to learn a language. It might be effective in facilitating vocabulary acquisition, but its effectiveness in teaching other aspects of language are yet to be confirmed.

In addition, Duolingo should consider varying their ways of teaching and include more visualizations in presenting its lessons as this would attract students better and prolong their attention spans. The developers of Duolingo should also work on adding language courses for non-English speakers such as for Malay, Tamil and Mandarin speakers.

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REFERENCES

Ahmed, H. B. E. (2016). Duolingo as a Bilingual Learning App: A Case Study. *Arab World English Journal, 7*(2): 255-267.

Botero, G. G., & Questier, F. (2016). What students think and what they actually do in a mobile assisted language learning context: new insights for self-directed language learning in higher education. In Papadima-Sophocleous, S., Bradley, L & Thouësny, S (Eds.), *CALL communities and culture–short papers from EUROCALL 2016 (*pp.150-154). Research-Publishing.net.

Ducate, L. & Lomicka, L. (2009). Podcasting: An effective tool for honing language students' pronunciation. *Language Learning & Technology, 13*(3): 66-86.

Finardi, K. R., Leao, R. G., & Amorim, G. B. (2016). Mobile Assisted Language Learning: Affordances and Limitations of Duolingo. *Education and Linguistics Research, 2*(2):48-65.

Gafni, R., Achituv, D. B., & Rahmani, G. (2017). Learning Foreign Languages Using Mobile Applications. *Journal of Information Technology Education: Research, 16*: 301-317.

Genesee, F., & Cloud, N. 1998. Multilingualism Is Basic. *Educational Leadership*, 55(6): 62-65.

Ghalebi, R., Sadighi, F., & Bagheri, M.B (2020) Vocabulary learning strategies: A comparative study of EFL learners, Cogent Psychology, 7:1, DOI: 10.1080/23311908.2020.1824306

Hockly, N. (2013). Designer learning: The teacher as designer of mobile-based classroom learning experiences. Monterey, CA: The International Research Foundation for English Language Education. Retrieved from http://www.tirfonline.org/english-in-the-workforce/mobile-assisted-languagelearning/.

Isbell, D. R., Rawal, H., Oh, R., & Loewen, S. (2017). Narrative perspectives on self-directed foreign language learning in a computer and mobile assisted language learning context. *Languages, 2*(2): 4-20.

Kim, H., & Kwon, Y. (2012). Exploring smartphone applications for effective mobile assisted language learning.*Multimedia-AssistedLanguage Learning 15*(1): 31- 57.

Krashen, S. D. (1987). *Principles and practice in second language acquisition*. New York.

Krashen, S. (2007). Free voluntary web-surfing. *The International Journal of Foreign Language Teaching, 3*(1), 2-9.

Kukulska-Hulme, A. (2009). Will mobile learning change language learning? *European Journal for Computer Assisted Language Learning, 21*(2): 157-165.

Kukulska-Hulme, A., & Shield, L. (2008). An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction. *ReCALL*, *20*(3): 271–289.

Lu, M. (2008). Effectiveness of vocabulary learning via mobile phone. *Journal of Computer Assisted Learning, 24*(6): 515-525.

Moeller, A. K., & Catalano, T. (2015). *Foreign language teaching and learning*. In J.D. Wright (Ed.), *International Encyclopedia of the Social & Behavioral Sciences (*pp. 327–33). Oxford: Elsevier.

Moeller, A. K., Ketsman, O., & Masmaliyeva, L. (2009). *The essentials of vocabulary teaching: from theory to practice*. In Guiscoigne, C & Bloom, M. (Eds.), *Diverse by design* (pp 1-16). Eau Claire WI: Crown Prints.

Moody S, Hu X, Kuo L-J, Jouhar M, Xu Z, Lee S. (2018). Vocabulary Instruction: A Critical Analysis of Theories, Research, and Practice. *Education Sciences*, *8*(4):180-202 https://doi.org/10.3390/educsci8040180.

Munday, P. (2016). The case for using DUOLINGO as part of the language classroom experience. *RIED. Revista iberoamericana de educación a distancia, 19*(1): 83-101.

Soleimani, E., Ismail, K., & Mustaffa, R. (2014). The acceptance of mobile assisted language learning (MALL) among post graduate ESL students in UKM. *Procedia Social and Behavioral Sciences*, *118*: 457-462.

Thornton, P. & Houser, C. (2005), Using mobile phones in English education in Japan. *Journal of Computer Assisted Learning 21*: 217–228.

Viswanathan, P. (2018, November 22). What is a Mobile Application? https://www.lifewire.com/what-is-a-mobile-application-2373354

Zubairi, A. M., & Sarudin, I. (2009). Motivation to learn a foreign language in Malaysia. *GEMA Online Journal of Language Studies 9*(2): 73-87.

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APPENDIX A

Sample of Test 1

A. Translate the greetings and sentences from the images below into French.
    Traduisez les salutations et les phrases des images ci-dessous en français

1. _____   2. _____   3. _____

4. _____   5. _____

5 marks

B. Match the pictures below with their corresponding nouns.
   *Faites correspondre les images ci-dessous avec leurs noms correspondants.*

A	Homme		C	Fille		E	Chien

B	Cheval		D	Chat		F	Garçon
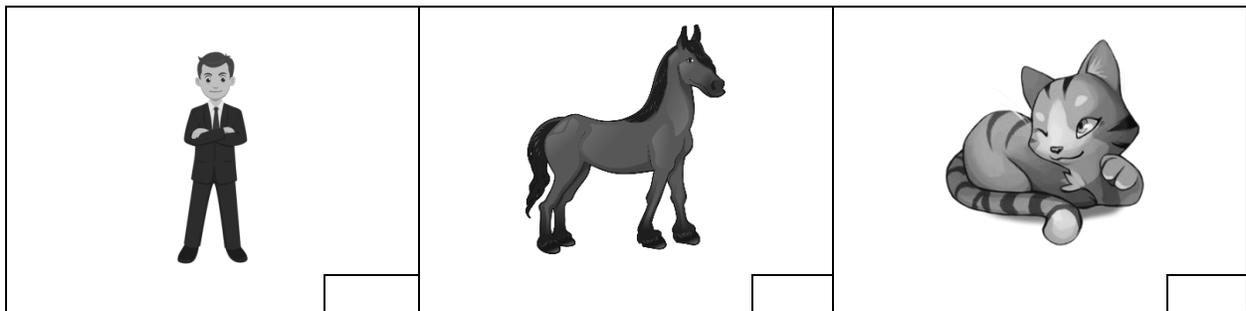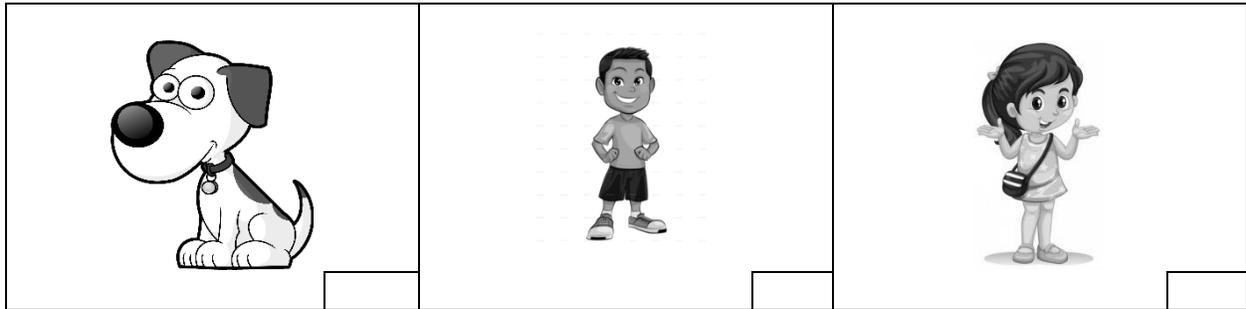
6 marks

C. Look at the following combination of pictures carefully. Write down the correct adjectives.
Regardez attentivement la combinaison d'images suivante. Notez les adjectifs corrects.
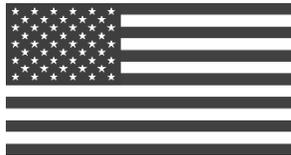
America + = _____

France + = _____

Mexico + = _____

Spain + = _____

4 marks

D. Look at the pictures below & identify the verbs.
Regardez les images ci-dessous et identifiez les verbes.

1. Je m'appelle Lucas.

1. _____

2. J'aime le chocolat.

2. _____

3. J'ai un chien.

3. _____

4. J'habite à Londres.

4. _____

5. Je prends mon repas.
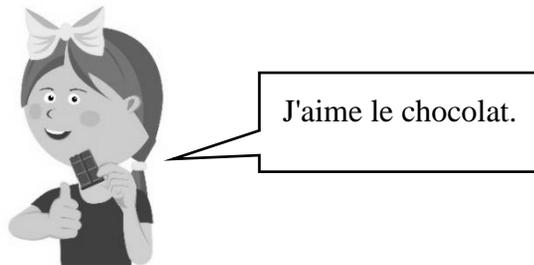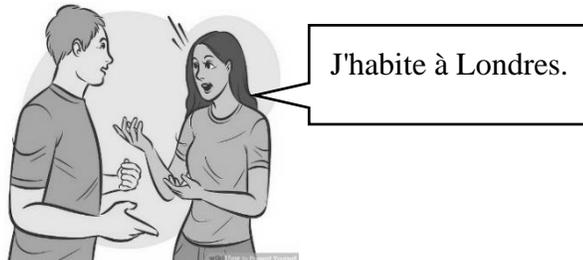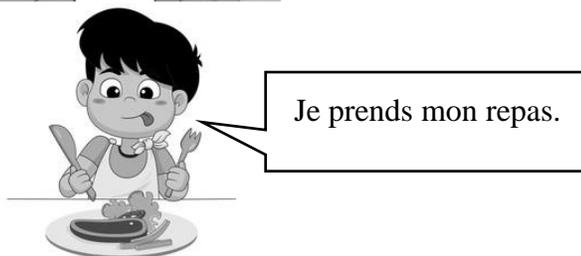
5. _____

5 marks

APPENDIX B

Sample of Test 2 & Test 3

A. Translate the greetings and sentences from the images below into French.
   Traduisez les salutations et les phrases ci-dessous en français.

1. _____

2. _____

3. _____

4. _____

4 marks

B. Identify the respective family members below.
    Identifiez les membres de la famille ci-dessous.
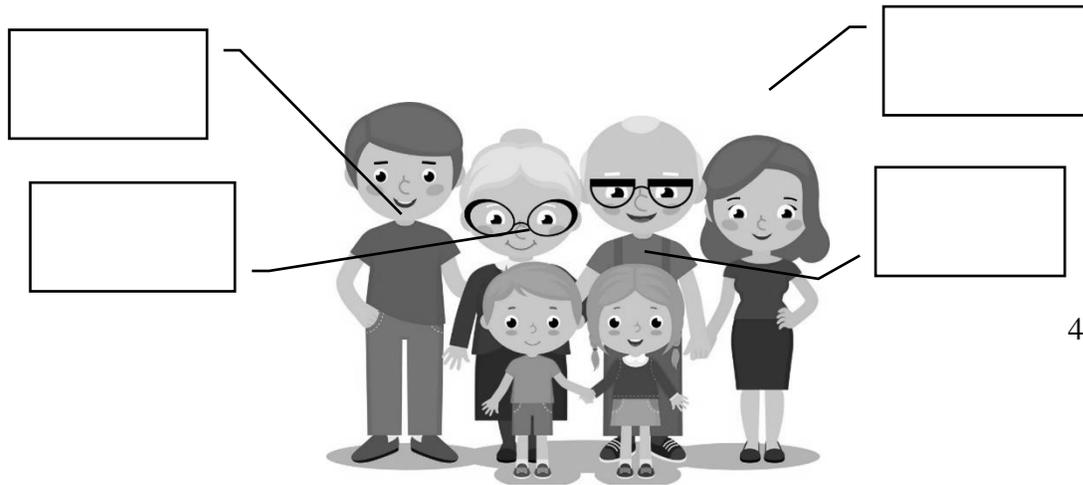
4 marks

C. Give the name of the transports below.
    Donnez le nom des transports ci-dessous.

1. _____

2. _____
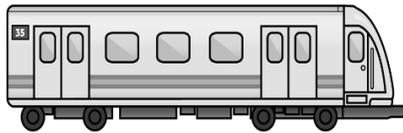
3. _____

4. _____

4 marks

D. Match the images below with the correct word.
    Faites correspondre les images avec le mot correct.

1. •

2. •

3. •

4. •

Boulangerie
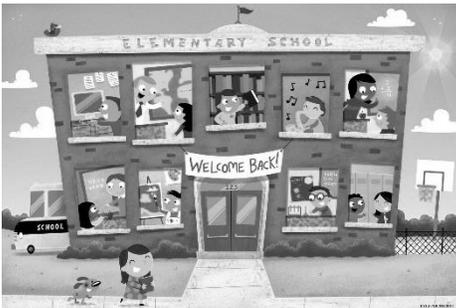
Banque

Gare

Jardin

École

Aéroport

4 marks

E. Look at the pictures below & identify the verbs.
   *Regardez les images et identifiez les verbes.*

6.   Vous parlez français.

_____

7.   Il travaille ici.

_____

8.   Nous lisons un livre.

_____

9.   Ils étudient beaucoup.

_____
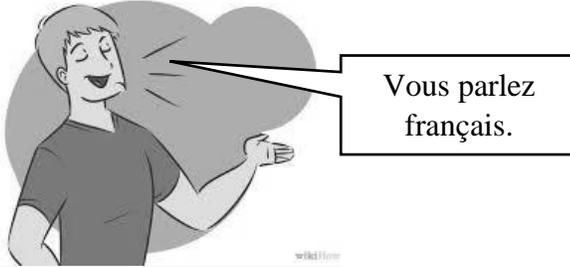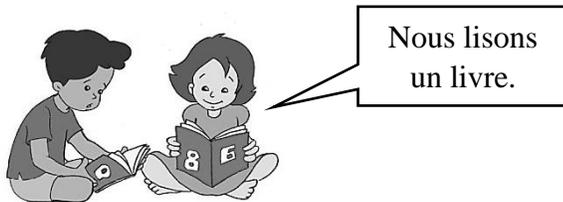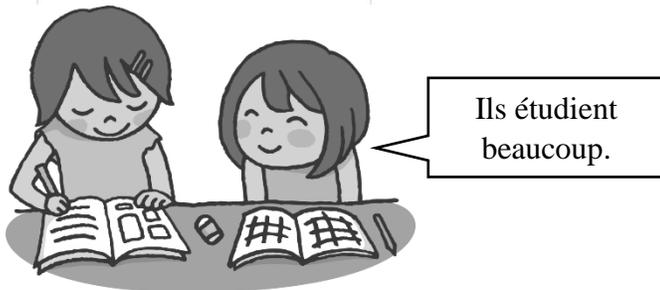
4 marks

APPENDIX C

SAMPLE OF ONLINE INTERVIEW QUESTIONS

A. Original Questions Adapted from Ahmed (2016):

1. Can you speak about your experience with Duolingo?
2. What have you learned in the past two months?
3. Are you planning to continue learning Spanish and English?
4. Have you ever thought of learning Spanish before using Duolingo?
5. If you want to be competent in Spanish or English, will you rely only on Duolingo?

B. Modified Questions
1. Can you talk about your experience with Duolingo?
2. What have you learned in the past 8 weeks using Duolingo?
3. In what way does Duolingo help you in learning French?
4. Does Duolingo help improve your learning in French class? If yes, how? If no, why?
5. Does the teaching method used by Duolingo helps you learn French?
6. Are you planning to continue learning French using Duolingo? If yes, why? If no, why?
7. Do you try finding other ways to learn French besides enrolling in French class or using Duolingo? For example, YouTube? Podcast? Other language apps? If yes, why? If not, why?
8. Would you use Duolingo to learn other languages? Or are you currently using Duolingo to learn other languages besides French?
9. If you want to be competent in French or any other languages, will you rely only on Duolingo?
10. Do you have any suggestions for Duolingo to improve?
11. Would you recommend Duolingo to your friends or your French teacher?