CHAPTER 4

DATA ANALYSIS

In this chapter, the writer analyzed the collected data. The analysis started with the demographic information of the students. The demographic information contains the information about students’ gender and their technology comfort level. After that, the writer continued to discuss students’ attitudes towards the use of mobile device for m-learning to answer the first research question. The writer not only defined whether the students’ expressed positive or negative attitudes but also discussed how mobile device assisted students in learning English as a foreign language. The further analysis discussed students’ self-efficacy towards the use of mobile device for m-learning. The writer discussed students’ self-efficacy level along with their capability to perform m-learning. In the last part of this chapter, the writer discussed the correlation between students’ self-efficacy and their level of technology comfort.
4.1 Demographic Information

The writer succeeded in collecting data of 100 students out of a possible 150 students after distributing the questionnaire. Specifically, there were 24 male and 76 female students (24% and 76% of the students) who participated in this study by filling out the questionnaire.

*Figure 1.* The Participants’ Gender Information.

*Figure 2.* The Participants’ Technology Comfort Level.
The chart showed students’ comfort level in using technology. The scale started from 1 to 5 (very uncomfortable to very comfortable). The result implied that the overall students had a high level of technology comfort since there was no student who rated the item 1 or 2. Only 13 (13%) out of 100 students who perceived somewhat comfortable towards technology. The other 55 students (55%) felt comfortable and the remaining 32 students (32%) felt very comfortable with the use of technology.

4.2 Students’ Attitudes towards the Use of Mobile Device for M-learning

Figure 3. Students’ Attitudes towards M-learning

Figure 3 presented the mean score of every statement in the attitude questionnaire. The mean score for overall statements is 4.01; therefore, it can be concluded that students expressed positive attitudes towards the use of mobile device for language learning. The following is the discussion of data analysis related to students’ attitudes. The writer discussed three statements with the highest mean scores and three statements with the lowest mean scores.
Statement 7 has the highest mean score of all statements regarding attitude. This statement represented the advantage of using a mobile device to access any information. The result indicated that most of the students considered mobile device connectivity helped their learning processes by allowing them to access learning materials faster. Gikas & Grant (2013) found a similar result, wherein the students in their study declared that mobile device connected them with the subject matter in a split second.

Figure 4. A mobile device allows me to access materials faster.
Figure 5 showed that the students favored not only the mobile device capability to access information in a quick time but also the authentic material which it offered. Eighty-seven (54% agreed and 33% strongly agreed) or more than a half of the students in this study agreed that mobile device could fulfill their needs of obtaining authentic material whenever and wherever they wanted to.

Figure 6. A mobile device allows me to access authentic materials anywhere and anytime.

Figure 6. A mobile device can help me attain more ideas in learning a language.
Mobile device connected students to plenty language learning resources that could bring better ideas. This is shown in Figure 6. The result showed that even though there was a student who disagreed, the other 90% of the students stated that mobile device was helpful to attain ideas for language learning purposes.

Statement 8 has the lowest mean score compared to the other statements. It discussed mobile device as a means of communication. There were 4 students (1% strongly disagreed and 3% disagreed) who disagreed that mobile device made communication with their classmates easier. Nevertheless, 67 students (49% agreed and 18% strongly agreed) agreed that communication with other learners using mobile device was easier since it allowed them to create collaborative learning. Students in Rossing, Miller, Cecil, & Stamper (2011) also showed their enthusiasm towards collaborative learning using a mobile device. They stated that mobile device allowed them to do a group work in a separate place yet simultaneously.

Figure 7. Interacting with peers is easier with a mobile device.
The advantages of using a mobile device for language learning did not affect 2 students. These students stated that mobile devices could not enhance their motivation to learn a language (see Figure 8). However, mobile devices succeeded in encouraging other 73 students (61% agreed and 12% strongly agreed) to stay motivated in learning language. A mobile device is capable of enhancing not only college students’ learning motivation but also elementary students. An elementary teacher in Ciampa (2014) reported that her students became more motivated to finish challenging assignments using a mobile device.

Figure 8. A mobile device can enhance my motivation to learn a language.
Figure 9 indicated that mobile device could not be a perfect companion for a student in this study to be an independent language learner. On the contrary, the other 67 students (50% agreed and 17% strongly agreed) expressed a positive reaction to the fact that the mobile device gave a chance to them to do independent learning without a guide or a teacher.

4.3 Students’ Self-efficacy towards the Use of Mobile Device for M-learning

Figure 9. A mobile device makes me an independent language learner.

Figure 10. Students’ Self-efficacy towards M-learning
The next discussion in this chapter is about students’ self-efficacy. The mean score for overall statement regarding self-efficacy is 4.08. The result is the same case as in students’ attitude, wherein the mean score for overall statement is more than 2.5; hence, it can be concluded that students had a high level of self-efficacy towards the use of mobile device for m-learning. The writer would like to break down all the statements to give more details on how students utilizing their mobile devices for learning language. The writer started the discussion from the highest mean score to the lowest mean score.

Statement 1 received the highest mean score among the other statements regarding self-efficacy. There was only one student who faced an obstacle to download online English lesson. In addition, it could be implied from Figure 11 that 92 students in this study (63% agreed and 29% strongly agreed) were capable of downloading English lesson from the internet without facing any significant problem. The result is similar to Yang (2012), in that...
students in his study stated that they could download learning material on the internet using their mobile devices without facing any trouble.

![Bar chart](image)

**Figure 12.** I can download and install mobile applications for language learning.

The students’ capabilities to download any kind of data for language learning purposes also reflected in Figure 12. There were 91 students (67% agreed and 24% strongly agreed) who were able to download and install applications for language learning from their mobile devices. Only 1 out of 100 students faced a difficulty in getting access to mobile application for language learning.
Eighty-eight students (66% agreed and 22% disagreed) demonstrated that they could surf the internet and find many language learning websites without any problem. None of the student disagreed, presumably, since they did not need to download or install to access the websites. It could be implied that most students in this study could get the access to language learning websites easily.

**Figure 13.** I can access language learning websites using a mobile device easily.

Eighty-eight students (66% agreed and 22% disagreed) demonstrated that they could surf the internet and find many language learning websites without any problem. None of the student disagreed, presumably, since they did not need to download or install to access the websites. It could be implied that most students in this study could get the access to language learning websites easily.

**Figure 14.** I can find more resources to access authentic language materials faster using a mobile device.
The result in Figure 14 showed that 84 students (59% agreed and 25% strongly agreed) were capable to find a great number of resources to access authentic language material in a quick time using their mobile devices. None of the student disagreed or strongly disagreed with Statement 3. It can be concluded that almost all of the students knew how to access authentic language material using their mobile devices.

Eighty-eight students (66% agreed and 22% strongly agreed) revealed that they were capable to optimize their performance in reading language article using their mobile devices. Unfortunately, there were 2 students (1% strongly disagreed and 1% disagreed) who still had difficulties in using a mobile device to read language articles effectively.
The lowest mean score in the questionnaire regarding self-efficacy is 3.91. Statement 6 obtained the lowest mean score, yet the result of students’ self-efficacy remained high. It became clearer that students had a high level of self-efficacy since there were more than a half of the students (67 students) who could implement language assignment which delivered on the internet well.

*Figure 16. I can execute internet-based language learning assignment well.*
4.4 The Correlation between Self-efficacy and Technology Comfort Level

In this study, the writer would also like to know the correlation between self-efficacy and the level of technology comfort. Below is the result of the data analysis using Pearson’s Product Moment.

Table 6. Correlation Coefficient

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<tr>
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<th>Technology Comfort Level</th>
<th>Self-efficacy (TOTAL)</th>
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<tbody>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>.392**</td>
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<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td>.000</td>
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<td></td>
<td>N</td>
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The correlation between self-efficacy and technology comfort level in this study was weak, yet positive. There was a possible explanation for this result. The explanation could be owing to the mobile technology primary function. The primary function of mobile technology is as a means of communication and entertainment (Kim, Rueckert, Kim, & Seo, 2013). Today students mostly used their mobile devices for communication and entertainment purposes rather than learning purposes. For example, the students in Jambulingam & Sorooshian (2013) viewed the mobile device as a communication and entertainment tool and not as a learning tool. Consequently, students may be capable of accessing any kind of communication or entertainment resources easily, but not for learning.
resources since they may need to be trained first to utilize their mobile devices for learning purposes. Training is capable of lessening anxiety and boosting self-efficacy in operating technology (Bates & Khasawneh, 2004), wherein psychological arousal such as anxiety is one of self-efficacy determinants (Bandura, 1997). Thus, even though students may have a high level of technology comfort, it did not make them had high level of self-efficacy towards the use of mobile device for m-learning.