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**COMMUNICATION STRATEGIES IN THE
DIGITAL AGE**

by

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LIST OF ABBREVIATIONS

CS	Communication strategy
CSs	Communication strategies
L1	First language
L2	Second language
L3	Third language
NL	Native language
ESL	English as a second language
EFL	English as a foreign language
ELT	English language materials
ELF	English as a lingua franca
FL	Foreign language
CMC	Computer mediated communication
VEC3D	Virtual environment communication context
TCS	Traditional communication strategy
TCSs	Traditional communication strategies
DCS	Digital communication strategy
DCSs	Digital communication strategies
MCS	Multimodal communication strategy
MCSs	Multimodal communication strategies

ABSTRACT

Communication typically requires utilising communication strategies (CSs) of either verbal or non-verbal skills to overcome the linguistic difficulties of the target language (linguistic level) and maintain communication effectiveness (pragmatic level). However, the proliferation of mobile devices has expanded these strategies by offering different features and applications. As the new form of communication strategy emerges, the topic merits further explanation, spurring the present CS research, which aims to explore the use of mobile devices as a communication strategy among ESL/EFL learners who use English as a lingua franca in communication.

Existing literature indicates that the studies of CS were traditionally conducted face-to-face, but after the advent of technology, researchers began to use the CMC context on desktops as a setting to research CS. More recently, the use of mobile devices in CS has also been identified in the literature, and language learners have been found to use CS when communicating online on their devices. However, so far, no studies have investigated how ESL/EFL learners use mobile devices as CS in a hybrid context. Therefore, such a study is indeed crucial and necessary to gain a deeper understanding of the use of this device as one of the CSs among this group of people during interaction. Consequently, this present study's focus on the use of mobile devices in a hybrid CS context is noteworthy.

To study this underexplored research area, I have chosen the qualitative constructivist perspective as the basis for my study. I also invented an approach which I named as a quasi-natural CS elicitation research approach that combines natural and unnatural elements to elicit CSs. Thirty non-native English language speakers (ESL/EFL) of different nationalities in a Malaysian university were recruited via purposive sampling to work in pairs. I also generated my data by observing and

recording participants' interactions in the tasks in natural settings. Dyadic interviews were also carried out among them to gather further information on the CS used in interactions.

The findings revealed that the participants used various CSs, namely traditional and digital CSs in communication. Their CS choice and usage were also influenced by factors such as attitude, culture, familiarity between speakers, physical context, and mobile devices properties. They were also found using a wide variety of CSs including mobile devices to communicate various language functions. One of them was using Google Search to gain accuracy of the content knowledge. The use of mobile devices as CSs also affected communication. They utilised multimodal CS, became autonomous communicators, and performed collaboration in communication. The occurrence of silence in interaction, however, was also identified as one of the effects of using mobile devices as a CS in communication. Overall, this study suggests that the use of CSs, including mobile devices, was beneficial to language speakers in communication.

CHAPTER 1

INTRODUCTION

This chapter commences with the description of my personal background as a researcher. Then, the general background to the study, which revolves around communication, communicative competence, communication strategies, and technology is exemplified. Following that, the focus of the study is described in detail. In addition, the aims of the study, research questions, significance of the study, and the organisation of the thesis are also presented in this section accordingly.

1.1 Personal Background

“where the researcher is coming from influences the entire research process...”
(Sikes, 2004, p. 4)

The statement by Sikes implies that researchers cannot be separated from their background values, e.g., personal experiences, culture, personality. And these values, as Clough and Nutbrown (2007) state, are undeniably “present throughout any study involving human beings” (p. 10). Creswell (2013) also argues that “researchers have a personal history that situates them as inquirers” (p. 51). Based on these researchers’ statements, I would conclude that researchers’ background values will always influence their research studies. In other words, “research can never be value-free” (Greenbank, 2003, p. 792). Frankly, I believe that my background values have shaped who I am today and, indeed, these elements have instinctively become an important part of my decision to conduct my research study. Therefore, recognising the significance of this dimension for my current work, I decided to inform the readers of the experiences that prompted my interest in the research topic I ultimately investigated. Further

explanations about my background values (i.e., personal experiences) that influence my current work are portrayed in the following.

1.1.1 My Stories

After I completed my degree in Teaching English as a Second Language (TESL), I was offered a position as an English language tutor at a university in my hometown, Kedah, which is situated in the northern region of Malaysia. There, I was given a task to teach English for Oral Communication to diploma students. After a few months of teaching them, I realised that they were reluctant to use the language. Some of them even confessed to me that they did not know the exact English words to use in interactions. They also mentioned facing difficulties when communicating using English due to their lack of vocabulary. This situation worried me and, as their teacher, I felt obliged to help my students to be able to interact using the target language, English. From there, I tried to carry out more games-based activities and group work to encourage them to use the language, and I somehow managed to motivate them to speak the language.

Not long after teaching there, I was given a scholarship to further my Master's studies at a university in northern England. Being in a new place was really challenging. The first few months there was a headache as I understood only a little of the local people's accent. I could remember vividly that I was struggling to communicate using the English language that I used to be comfortable with back in my home country, but not anymore here. I can recall my experience of going to a shop to top up my cell phone. There, I simply used gestures to tell the lady at the counter that I needed a top up as I was not confident to make any linguistic attempts. It was not that I did not know the

language, but I was merely afraid that she would not understand my English and, most importantly, I did not want to look foolish in front of other people.

After quite a time there, however, I managed to overcome my fear and started using the language with more confidence. One day, during my Second Language Acquisition class, we had a discussion on Communication Strategies (CS), and this was the first time I came across the term. From there, I realised that the communication difficulties that my previous students and I faced in interactions could actually have been overcome if we had known how to employ communication strategies, e.g., verbal and non-verbal strategies to deliver our messages. However, my involvement with communication and communication strategies did not end there. Upon the completion of my studies, I went to Germany to join my husband who was at that time studying there. However, I could foresee the same problem - communication difficulties! After a few days in Germany, my husband bought me a smartphone to replace my previous cell phone. Previously, I could only make and receive calls and send SMSs, but with the new mobile device I was able to communicate with my husband using WhatsApp and enjoyed exploring other applications on the phone.

Since the studio flat we rented was not equipped with an Internet connection, we had to make an appointment for the technician to come and check for the connection. On the day the technician came, my husband was still at university and the only option that I had at that time was to communicate with the technician. I started panicking when he began to converse in German. I remembered replying to him "*Moment! Moment!*" and "*Entschuldigung!*" each time he spoke to me. Trying to overcome the communication breakdown, I spontaneously grabbed my smartphone and started to type "*Sorry I do not speak German*" on Google translate. I quickly read the translation and

frankly it sounded so funny the moment I said the phrases “*Es tut mir leid, ich spreche kein Deutsch*” to him. I also tried to reach my husband by texting him via WhatsApp. After a while, the problem was solved when my husband texted me the word “*telefonanschluss*” (phone line) and asked me to say the word. The technician nodded his head when I uttered the word, and eventually, by using hand gestures, I showed him the location of the phone line.

Based on the lived experiences described above, I would summarise that my personal experiences encountering communication difficulties in face-to-face interactions, coupled with my background as a teacher and a learner of English, provided the roadmap for the current research study. Additionally, my experiences using mobile devices in interactions, combined with reading the recent literature in this area, have contributed to my growing interest to explore the feasibility and applicability of mobile devices as a communication strategy in communications.

Overall, I believe that my personal background has influenced my choice of research project and my perspective towards it is consistent with the constructivism paradigm chosen for this study, which recognises the existence of the researcher’s own experiences and background in designing and interpreting their research studies (Creswell, 2003; Crotty, 1998). Furthermore, my study is also methodologically in line with the constructivist approach, which focuses on the researcher generating meaning from the data gathered in the field. That is, I conducted observations and dyadic interviews to explore my participants’ use of communication strategies, including mobile devices, which is discussed in more detail in section 3.5.

Having described the parts of my personal background that influenced my choice of research project, the following section explains the background to the present study, followed by other important sections which build this chapter.

1.2 Background to the Study

Communication refers to a process of transmitting intended messages from senders to receivers for interactional and transactional purposes (Hua, et al., 2012; Muñoz & Contreras, 2018). In general, there are three main elements involved in communication: 1) communicator; 2) message; and 3) context (Jamshidnejad, 2020a; Somsai & Intaraprasert, 2011). Inevitably, language is used to communicate and express what we mean in everyday situations (Lightbown & Spada, 2006; Lynch, 1996). Therefore, when an individual learns a language, as a second or foreign language, they usually want to make sure they are able to communicate using the language learnt in real social interactions (Tavil, 2010). Hedge (2000) also reported that the ability to communicate in the target language has now become one of the main goals of second and foreign language learners. For this reason, it is not surprising that they are trying their best to be proficient in the language being learnt, such as English which is the focus of this study. Compared to other languages, English is spoken by many people around the world (Szmigiera, 2021), and as Melitz (2018) points out, no language has ever been spoken as widely as English, suggesting that it is indeed the most widespread language globally. In 2021, about 1.35 billion people spoke English, whether as a first or second language. Mandarin Chinese was the second most spoken language that year, with Hindi and Spanish in third and fourth place respectively (Szmigiera, 2021). The widespread use of English by many people around the world is no surprise, for as Jenkins (2013) asserts, the language has served as a lingua franca in the past and

continues to do so today, especially in many of the countries colonised by the British since the late sixteenth century, such as India, Singapore and Malaysia.

English as a lingua franca, as defined by Sato, et al. (2019) and Melitz (2018), refers to the use of this language as a medium of communication between speakers of different first/native languages. This term seems to be consistent with my study, as the focus of the study was to investigate the use of communication strategies, including mobile devices, among ESL and EFL speakers of different nationalities and first languages. In the tasks I conducted, they used English as their lingua franca, which took place in several natural settings at University Utara Malaysia (UUM), which uses English as a medium of instruction in teaching and learning (Misiran, et al., 2018).

Generally, in Malaysian ESL classrooms, teachers use a combination of different methods to teach English, such as the grammatical translation method (GMT), code-switching practise, and communicative language teaching (Ariffin & Susanti Husin, 2011; Chen & Maarof, 2017; Raissi & Mohamad Nor, 2013). And undeniably, the use of these strategies has advantages and disadvantages in the context of teaching and learning (Elmayantie, 2015; Malik, 2010; Teh, 2021). Khan, et al. (2016) highlight that the use of GTM is useful for language learners in that they can quickly understand the concepts in their textbooks when they are explained by their instructors in their mother tongue. Therefore, GTM is seen by them as a time-saving method. However, Khan, et al. (2016) also assent that this method may not be so useful in improving listening comprehension and speaking of a language, but would be very effective in developing and improving learners' reading and writing skills.

As for the use of code switching in the classroom, Mohammadi, et al. (2019) and Puspawati (2018) agree that the use of this strategy has several positive functions,

such as building a good rapport between students and teachers, developing learners' interest in learning English, and making it easier for those with low English proficiency to quickly understand the difficult or newly introduced terms in class. Despite these positive functions of code switching in teaching and learning, McMillan and Rivers (2011) consider the use of CS in the classroom to be counterproductive to the learning process and should therefore only be used as a last resort. The communicative language teaching (CLT), which focuses on language use rather than language structure, is another method that is widely used in the Malaysian classroom. This method compared to those two explicated earlier is beneficial to language learners as it focuses on learners' speaking skills and overall competence in English (Mangaleswaran & Aziz, 2019; Raissi & Mohamad Nor, 2013). Overall, educators in Malaysia have used various teaching methods to teach English which may benefit the ESL language learners in general.

Although the English language is commonly used in Malaysian ESL classrooms, Misiran, et al. (2018) argue that the Malay language is still the predominant language in the Malaysian education system, especially in government schools. Thus, the phenomenon of switching from Malay to English at university might be a shocking experience for some Malaysian ESL, especially for those who have had little or no exposure to English which, as a result, might affect their academic performance. In addition, the ESL/EFL learners of different nationalities who are studying in Malaysian universities and whose English was not the predominant medium of instruction in their home country might also face the same challenge. To avoid difficulties in learning at university level, language learners may perhaps want to work on their proficiency level of the target language, and as advocated by Crystal (2003), it is important for language learners to be competent at the language as it offers enormous advantages to speakers,

such as better education and more opportunities to find and secure a good job (Baker & Westrup, 2003).

To become a proficient language speaker, one needs to develop one's communicative competency¹. Communicative competence (CC) consists of multiple different components (Llurda, 2000). Among all, grammatical, sociolinguistic, discourse, and strategic competence are the four main components normally needed to be a competent language speaker (Bagarić & Mihaljević Djigunović, 2007; Canale, 1983; Celce-Murcia, 2007). The first component relates to the ability to use the correct grammar, syntax, and vocabulary of the learned language. The second component, sociolinguistic competence, “requires an understanding of the social context in which language is used: the rules of the participants, the information they share, and the functions of the interaction” (Muniandy, et al., 2010, p. 146). The third element, discourse competence, pertains to the cohesion and coherence of utterances (in spoken discourse) or sentences in written discourse. To attain an effective discourse, one needs to be able to use words appropriately to construct sentences and phrases. Finally, strategic competence, the fourth element, is the ability to utilise verbal or non-verbal behaviours, or indeed both, as communication strategies (henceforth CS). Each of the components in CC are interconnected with one another and significant in ESL/EFL learning and communication (Hussein & Elttayef, 2017; Keshmirshakan, 2019; Uso'-Juan & Martinez-Flor, 2006). However, compared with other components, strategic competence, which consists of CSs, is regarded as the most crucial element. This is because it helps learners compensate for difficulties in communication and enhance the effectiveness of communication (Canale, 1983; Loranc-Paszyk, 2015). This means CS

¹ The terms ‘language speakers’ and ‘language learners’ are used interchangeably throughout the thesis. These two terms refer to those who learn and speak the languages.

functions as a problem-solving strategy whilst at the same time serving as a communication enhancer - the strategies can be applied at the pragmatic level to improve communication effectiveness (Mariani, 2010), making it an aspect worth exploring. Further explanations about communication strategies and pragmatics are presented in sections 2.3 and 2.6.

Pertaining to communication strategies studies in interaction, the literature reveals that the majority of CS research has been conducted face-to-face (offline) (e.g., Bialystok & Fröhlich, 1980; Haastrup & Phillipson, 1983; Si-Qing, 1990). This is understandable as the study of CSs started four decades ago, at the time when technology, such as smartphones, was not such a part of human communication. However, with the rapid advancement of technology, these studies have shifted from face-to-face (FTF) to computer-mediated communication (CMC) (e.g., Hung & Higgins, 2016; Omar, et al., 2012; Shih, 2014; Smith, 2003). CMC, as defined by Simpson (2002), refers to “human communication via computers” (p. 141). Specifically, computers need to be connected to the Internet before speakers can actually communicate on a CMC platform (e.g., Facebook). Once connected, language speakers would be able to interact and utilise various communication modes (e.g., emoticons, online tools) provided by CMC as communication strategies. A number of studies on the use of communication strategies in CMC via desktops (e.g. Hung & Higgins, 2016) have been undertaken but, to my knowledge, studies on the use of mobile devices in the area of communication strategies is almost non-existent. Therefore, my present study was conducted to explore this matter in detail.

1.3 Focus of the Study

With the exponential growth of technology, desktop computers have evolved in recent years into laptops and, subsequently, mobile devices. These technologies, despite their different characteristics in terms of portability and size, play an important role in education and language learning, with very similar positive and negative effects for their users (e.g., Jarvis & Achilleos, 2013; Kayapinar, et al., 2019; Satar, 2016). On the positive side, these technologies can be connected to the Internet and learners have access to various interactive multimodalities such as text, graphics, audio, video and animation, with which they are all equipped (e.g., Artan, 2016; Loewen, et al., 2019; van Der Zwaard & Bannink, 2014). For example, studies by Veytia-Bucheli, et al. (2020), Kayali (2021) and Chang (2016) have found that learners use different types of emoticons, emojis and memes in social media communication via computers, laptops or mobile devices. Using this type of online communication seemed to be effective as users from different social and cultural backgrounds understood emojis and were able to connect and engage in a consistent way despite different demographic backgrounds (Chang, 2016; Danesi, 2016). The use of emojis online by EFL learners, as suggested by Algaraady and Mahyoob (2021), also plays a significant role in interpersonal communication, as users found that this new way of communicating can replace languages, in particular, where these emojis can effectively represent their feelings and thoughts. As for memes, the use of this new way of communication can help to promote students' language level and give them a better understanding of the English topics learned in class and the English language (Kayali, 2021).

On the negative side, the use of technology, especially mobile devices in the classroom, could distract students (Nazir, 2020; Ugur & Koc, 2015). For example, they

might surf websites or materials unrelated to learning while using the Internet (Fernandez, 2018). They might also be tempted to use their mobile phones when lessons are boring or uninteresting (Ott, et al., 2018). In addition, the new communication that has emerged through these technologies, such as the use of emojis and memes, can interfere with the standard writing skills by learners overusing short forms in their spelling, making structural errors in their texts and have difficulty expressing their intended meanings using written forms (Algaraady & Mahyoob, 2021).

All in all, I have briefly explained a few studies on the use of technologies and their boons and banes in language learning from the multitude of studies available in the literature. However, of the three mentioned, mobile devices categorised as mobile technology have been discussed extensively in the literature so far in various fields such as education, language learning and communication² (e.g., Honarзад, 2019; Metruk, 2021)

As reported by Mazlan and Hamid (2017), there are 3.79 billion mobile device users out of a 7.395 billion total global population. In addition, Heisler (2016) also contends that more people favour accessing the web or Internet content via mobile devices than through desktop computers. He mentioned that 51.3% of all website traffic worldwide was made using mobile devices, compared to 48.7% of access from desktop computers in October 2016. The number of Internet users using mobile devices continues to rise, going from 37.38% to 48.33% in November 2019 relative to desktop Internet users, which indicates a declining trend from 54.86% to 46.5% (Petrov, 2020). Meanwhile, in Malaysia, the number of smartphone users in the country has been estimated at 30.41 million in 2020 and, with its increasing population, the number of

² Mobile devices is the general term used for handheld computers such as tablets and smartphones.

people who use smartphones is expected to exceed 33 million by 2024 (Müller, 2020). This high percentage of mobile users in Malaysia indicates that one person may have more than one mobile device, which in a way portrays the mobile devices ownership among Malaysians (Mazlan & Hamid, 2017). Overall, the underlying assumption of the aforementioned details is that the popularity of mobile devices has risen dramatically, and is perhaps due to the increased functionality in mobile devices as well as other various technologies (e.g., fast wireless connection) associated with this tool (e.g., Levesque & Pahlavan, 2013; Marriot & Williams, 2016).

With regard to mobile devices, those using them can also engage in CMC platforms in the same manner as desktop users (Smith, 2016). Specifically, within that environment, they can apply various communication modes as CS. However, being more advanced than desktops, mobile devices come with key features such as portability and connectivity, which allow their users to engage in CMC any time, anywhere, and enable them to employ CSs on the spot (e.g., Barrs, 2011; Moreira, et al., 2017). In addition, the available mobile apps in the mobile devices can also be employed as one of the CSs during interactions (Godwin-Jones, 2011, 2017). Taken together, the use of mobile devices as CSs, as opposed to desktop computers, can be practical to support communication between language learners, as their advanced features enable portability and ubiquity that can be used regardless of time and place, as highlighted in the previous paragraph. Hence, this study was conducted by exploiting the characteristics of mobile devices to investigate the use of communication strategies, including the use of mobile devices as one of the CS in natural environments. The previous studies of CS (e.g., Hung & Higgins, 2016; Shih & Yang, 2008; Smith, 2003) which used the online environment over desktop computers as the setting, only discussed the use of CS online, such as the use of Google Search and Google Translate, as detailed in 2.8.2. This study

is a little different from the previous CS studies conducted online, as it explored the use of mobile devices as one of the CS, such as the use of digital CS (e.g., Google Search and Google Translate) or a combination of digital and traditional CS by participants online and offline (face-to-face), which contributes to the use of multimodal communication strategies. To date, there have been few studies on the use of mobile devices as CS in communication but the aim was to explore the use of different CS online on mobile devices (Cheng & Lu, 2016; Fang, et al., 2018; Sulaiman, et al., 2018), as explicated in 2.8.3 (a) (viii) paragraphs 4 to 5. In contrast to these studies, mine focused on the use of mobile devices as CS in online and offline settings, what I call a hybrid CS context. This context can be considered unique, as no CS studies to date have combined these two contexts to explore CS (see 2.8.1). Therefore, this study, which investigated the use of CS in a hybrid CS context, is worth exploring.

1.4 Aims of the Study

The thesis aims to explore communication strategies, including the utilisation of mobile devices as one of the CSs among non-native English language speakers of different nationalities studying at a Malaysian university. In addition, the reasons behind their CS usage and the potential effects of using a mobile device as a CS among them in interaction were also explored. To achieve these aims, the following research questions and objectives are formulated.

1.5 Research Questions and Objectives

Each of the research questions, along with a brief explanation of the objective for each, is provided in Table 1.1, below:

Table 1.1 Research questions and objectives

<p>1. Do the participants employ communication strategies in interactions?</p> <p>a) What are the examples of strategies being employed in interactions?</p> <p>b) Are mobile devices being employed in communication strategies?</p> <p>c) Which mobile devices applications are being used to interact?</p>	<p>To explore the types of communication strategies, including the use of mobile devices as a CS in interactions, among non-native English language speakers of different nationalities.</p>
<p>2. What are the reasons behind the use of these communication strategies?</p>	<p>To explore the factors and functions of using CS in interactions among non-native English language speakers of different nationalities.</p>
<p>3. Are there any effects of employing mobile devices as the CS in interactions?</p>	<p>To explore the advantages and disadvantages of using mobile devices as a CS in interactions among non-native English language speakers of different nationalities.</p>

1.6 Significance of the Study

The current work is significant as it will provide several contributions to the empirical and pedagogical aspects of CS studies. In terms of the former, first, a review of the literature reveals that there have been studies of communication strategies based around face-to-face (Ghout-Khenoune, 2012; Si-Qing, 1990) and computer-mediated communication (Hung & Higgins, 2016; Kost, 2008; Smith, 2003), but a thorough look at the literature reveals that studies involving the use of mobile devices as one of the CSs in face-to-face interactions is still yet to be performed, which makes this present study a particularly worthwhile undertaking. Also, further investigations into the study of CSs, particularly as carried out by Malaysian scholars (Hua, et al., 2012; Ismail & Kaur, 2012; Omar, et al., 2012; Sulaiman, et al., 2018), revealed that, to date, research on the employment of mobile devices as part of CS in face-to-face interactions among

non-native English language speakers of different nationalities at the university level is barely found. It therefore seems necessary for researchers to shed light on the use of mobile devices as one of the CSs, thus extending the current body of research on communication strategies.

Second, in terms of CS research methods, the literature states that the laboratory has been highlighted as the most frequently employed approach in researching communication strategies (e.g. Gass & Mackey, 2011; Haastrup & Phillipson, 1983). However, despite resorting to the traditional CS approach mentioned above, this study provided an alternative way of researching CS, namely the quasi-natural CS elicitation research approach. This approach, to my knowledge, is not to be found across the CS literature and will, in this regard, contribute to the literature of CS studies. Further explanation about this approach is presented in section 3.6.3. Interviews were also conducted to elicit the use of communication strategies among the participants of my study. This approach, commonly practised in CS studies, is undertaken to gain further information about the use of CS during the elicitation tasks among the participants (Omar, et al., 2012; Uztosun & Erten, 2014). However, my study, being a little different from the earlier CS research, has carried out interviews to elicit information about the participants' CS usage and mobile device utilisation as a CS during the conducted tasks as well as everyday communications.

Finally, in relation to the pedagogical contribution, my study's findings revealed that the participants employed a wide range of communication strategies - traditional and digital CSs in communication. These CSs were employed due to multiple factors (i.e., attitude) and for multiple reasons (i.e., achieving understanding in communication), suggesting that CSs are a valuable tool for non-native English

language speakers of different nationalities during the interaction. My findings also revealed that mobile devices as a CS are generally advantageous for the participants in communication. For instance, they could become autonomous communicators and foster increased interaction between them when using mobile devices in the interaction. Overall, I believe that the findings of my research are useful and may provide valuable insights into communication strategies studies, language learning, and technology. In addition, the findings of this study may be useful to those responsible for creating specific modules or education on communication strategies, which have been scarce. Further explanations about contributions and implications of my study are presented in the final chapter (see 6.2 and 6.3).

1.7 Organisation of the Thesis

The thesis consists of six chapters. The first chapter is the introduction of the study. The second provides a literature review on the subject. The third discusses the methodology of the study. Chapter four reports the study's findings, while Chapter five draws on the discussion of the entire findings. The final chapter recaps the entire study. Each chapter is described in more detail below.

Chapter One is the introduction. It begins with my personal background, which has heavily influenced the present study. This chapter also provides a background to the study, the focus and aims of the study, research questions and objectives, the significance of the study, and the organisation of the thesis.

Chapter Two, which is the literature review, presents the literature underpinning my research study. Particularly, this part covers important themes pertaining to communication, communication strategies, and mobile devices.

Chapter Three discusses the methodology. It begins with the research paradigm of the present study. It also presents the participants of the study and how they were recruited, the data collection methods and procedures, the qualitative data analysis, and the ethical considerations of the study.

Chapter Four presents the findings of the study as generated from observations and interviews. They are presented in the form of themes in response to each research question posed in the study.

Chapter Five discusses the findings of this study pertaining to the relevant literature and theories to answer the study's research questions.

Chapter Six concludes the thesis. In this part, the contributions, implications, limitations, recommendations of the research, and the conclusions to the study are provided.

1.8 Chapter Summary

Overall, this chapter has set the scene for the research through the provision of the essential introductory information related to this study, namely of communication strategies in the digital age. It is envisaged that the reader will have been able to attain a preliminary understanding of the current work via this chapter. In the following chapter, I review the literature related to this study.

CHAPTER 2

LITERATURE REVIEW

This chapter discusses the body of literature that underpins my research study. I commence by presenting English language communication following the notion of communicative competence. I then discuss communication strategies, which is the focus of my study. I include the history of CSs, their conceptualisation, the CSs taxonomies, pragmatics, the contexts of studying CS, and the possible factors and functions of using CSs in communication. Further, I also present relevant past studies regarding the use of CSs by language learners in communication. I also review the literature on mobile devices and describe their characteristics and limitations in this chapter. In the final section of this chapter, I bring together a summary concluding all the topics mentioned above.

2.1 English Language Communication

Communication is an inseparable language learning element, and to learn a language, one must talk³ (Dörnyei, 2003; McCroskey & Richmond, 2005). This means that one must communicate more to practise language use to achieve “higher levels of communicative competence and success” in the learned language (Vafadar, et al., 2019, p. 102). Communication consists of three essential components: first, communicator; second, message; and finally, context (Jamshidnejad, 2020a; Somsai & Intaraprasert, 2011). A communicator, at the same time, acts as a sender and receiver of messages. While person A is communicating, they are usually also monitoring the effects of the

³ One should be aware that not all people are able to convey their intended meanings verbally due to having hearing impairment (i.e., being deaf, or hard of hearing). However, these people could learn and use sign language to communicate in different languages, which proves that non-speaking people can also acquire many languages and communicate in everyday life (Domagała-Zyśk & Kontra, 2016).

verbal communication, requiring information from B to be simultaneously received. Respectively, person B, in listening to A, is also reacting to A's utterances. Meaning that each speaker plays a role as a 'source-receiver' of messages during communication (Hargie, 2011). The second element, the message, relates to a communicator using words, sounds, and actions to deliver the content of the communication they wish to impart, such as pattern of thought, organisation of idea, and feelings in ongoing communication. (Gamble & Gamble, 2013; Hargie, 2011; Jamshidnejad, 2020a). And finally, context refers to the contextual variables that surround communicators and may influence their communication. Among examples of variables are physical, social, psychological, cultural, and historical relationship (Verderber & Verderber, 2003).

Communication, as described by scholars, usually comes in two types, namely intrapersonal (transactional) and interpersonal (Lane, 2016; Wood, 2009). The term intrapersonal communication relates to "the thinking process that occurs within and to the self" (Emmitt & Gorse, 2003, p. 46). This type of communication can be linked to the psycholinguistic conceptualisation of CS which accentuates an individual's communication behaviour (see section 2.4.3). On the other hand, interpersonal communication refers to the transaction of messages or information being delivered simultaneously between two or more people (Lamb, et al., 2011; West & Turner, 2010). This concept is associated with CS's interactional conceptualisation, which emphasises the joint efforts between speakers in communication. Considering that communication may occur within an individual and between people and simultaneously, I, therefore, decided not to side with one type of communication but rather treated communication in the present study as a combination of both, and it was worthwhile to study CSs in communication.

English is one of the languages used by speakers to express their feelings and/or share information with others in communication, offline and online (Mesibov, et al., 2005; Mohammed, 2021). This global language, as claimed by Crystal (2003), is “now the language most widely taught as a foreign language – in over 100 countries, such as China, Russia, Germany, Spain, Egypt and Brazil...” (p. 5). Indeed, English is also highly valued in Malaysia. Since 1957, it has been accorded the status of second language, as stated in Article 152 of Malaysia Federal Constitution (Constitution of Malaysia, 1957). Despite the widespread use of English in Malaysia and specifically within the university context, the non-native English language speakers of different nationalities at university level seem to face difficulties in communicating effectively using the target language (e.g., Awang, et al., 2015; Omar, et al., 2012; Uгла, et al., 2013a). It is possible to counter this communication difficulty, however, by employing strategic competence. Not only that, but mobile devices could potentially be utilised as one of the CSs for compensating any difficulties arose at the same time making their communication effective. Nevertheless, the study on the use of mobile devices as one of the CSs in English communication is rarely found except for a few available reports in the literature (Cheng & Lu, 2016; Fang, et al., 2018; Sulaiman, et al., 2018).

Overall, I have illustrated communication, and its basic elements and types, as proposed by scholars. The use of English as a communication tool among language speakers was also highlighted in this part. As discussed previously, the ESL/EFL language speakers of different nationalities at the university level face difficulties to efficiently communicate in the language. To address this phenomenon, they can probably use CSs, including the use of mobile devices, as a useful alternative to overcome communication difficulties or to maintain communication. The chapter now turns to the next topic: the notion of communicative competence.

2.2 The Notion of Communicative Competence (CC)

Linguistic competence is a term attributed to Chomsky (1965), who made a distinction between competence and performance. Below is an extract taken from his well-cited book, *Aspects of the Theory of Syntax*, addressing competence and performance:

We thus make a fundamental distinction between *competence* (the speaker-hearer's knowledge of the language), and the *performance*, the actual use of the target language in concrete situations. (Chomsky, 1965, p. 4)

This statement by Chomsky clearly shows that he distinguished between competence and performance. From his perspective, language is considered a formal, rule-governed structure that excludes the concerns of appropriate language use in any social context. Simply put, the concept of competence introduced by Chomsky (1965) only emphasised the speaker's ability to produce grammatically correct sentences without taking into consideration of how and when to use the utterances appropriately in context. Not long after Chomsky (1965) came out with this competence concept that accentuated the speaker-hearer's linguistic knowledge of the language, other researchers (e.g., Hymes, 1972; Savignon, 1972), whose perspectives were inclined towards situational and sociolinguistics, criticised Chomsky's idea of competence (Llurda, 2000). These researchers argued that the notion of competence he characterised was idealised and purely linguistic, which made it unsuitable as a theoretical foundation for the methodology of learning, teaching, and testing languages.

An alternative to Chomsky's concept of competence is Hymes' *communicative competence concept* (1972) which combines both communicative and competence elements. The concept proposed by Hymes (1972) clearly demonstrates the shift from

the study of language as a system as espoused by Chomsky (1965) towards the study of language as communication. In addition, communicative competence as outlined by Hymes (1972) also acquires both *knowledge* as the knowledge of the language, and *ability for use*, which was considered to be the capacities of language-use, with an emphasis on performance in real time and in different contexts (Hymes, 1972). The concept of communicative competence proposed by Hymes is arguably a more comprehensive and realistic idea compared to Chomsky's view of competence (Bagarić & Mihaljević Djigunović, 2007), as not only does it include the knowledge of language and learning rules in the Chomskian sense (linguistic competence), but also the ability to utilise the language in various situational contexts (sociolinguistic competence) (e.g., informal conversations with friends at a party with formal conversations with a banker at a bank) (Yano, 2003).

In the 1970s and 1980s, many researchers (Canale & Swain, 1980; Canale, 1983) continued to carry out the work of defining and developing the concept of communicative competence in the second language teaching and learning context (e.g., Spada, 2007; Yano, 2003). Canale and Swain (1980) and Canale (1983) viewed the communicative competence theory as a mixture of an underlying system of *knowledge* and *skill* needed in communication. *Knowledge*, according to them, comes in three types: “knowledge of basic grammatical principles (i.e., grammatical competence), knowledge of how language is used in social contexts to perform communicative functions (i.e., sociolinguistic competence), and knowledge of how utterances and communicative functions can be combined according to the principles of discourse (i.e., strategic competence)” (Canale & Swain, 1980, p. 20). As for *skill*, this refers to how a speaker can utilise the knowledge in actual communication (Bagarić & Mihaljević Djigunović, 2007).

Originally, the concept of communicative competence introduced by Canale and Swain (1980) was comprised of three elements, namely grammatical, sociolinguistic, and strategic competence. However, three years later, Canale, in 1983, further divided sociolinguistic competence into two components: sociolinguistic and discourse competence and, therefore, created a final version of a communicative competence framework which consists of four components (e.g., Celce-Murcia, et al., 1995; Csepes, 2009), as listed below.

1. Grammatical competence - knowledge of grammatical principles and rules (vocabulary, pronunciation, spelling, etc.).
2. Sociolinguistic competence - mastery of the sociocultural rules required for using the language in different social contexts (appropriate application of vocabulary, register, politeness, and style in a given situation).
3. Discourse competence - the ability to combine utterances or communicative functions into various types of cohesive texts (e.g., political speech, poetry).
4. Strategic competence - the knowledge of verbal and non-verbal CSs employed to compensate for breakdowns in communication and to enhance the effectiveness of one communication.

(Canale, 1983, pp. 6-11)

Figure 2.1 Communicative competence by Canale (1983)

Overall, theoretical and empirical studies on communicative competence have contributed to changes and adaptation being made to the communicative competence framework (e.g., Canale, 1983; Celce-Murcia, et al., 1995; Uso'-Juan & Martinez-Flor, 2006). In spite of various modifications and interpretations made by different theoreticians that reflect their different views on *communicative competence*, they are in agreement that a competent language user should not only possess the knowledge of the language but also be able to use that knowledge to communicate in different contexts (Bagarić & Mihaljević Djigunović, 2007), which means that one may need to

sufficiently acquire all the competencies, namely grammatical competence, sociolinguistic competence, discourse competence, and strategic competence, to communicate effectively in various settings (Al Alami, 2014). However, of these, strategic competence is the most crucial component that language speakers need to acquire as it helps to overcome “insufficient competence in one or more of the other areas of communicative competence” (Muluken & Bidu, 2017, p. 2), which is worth investigating.

2.3 Strategic Competence (SC/CS)

The term SC, which denotes communication strategies (CS), has been differently defined and interpreted by different scholars according to its function and scope within language acquisition (Byram & Hu, 2012). Despite them defining it differently, all agreed that this notion is, first, interrelated with other communicative components, one of which is pragmatic competence (Savignon, 1983; Uso'-Juan & Martinez-Flor, 2006). Second, SC is the essential component that helps to compensate for the limited or imperfect knowledge of other competencies (Muluken & Bidu, 2017).

Canale and Swain (1980) were the first scholars to introduce this component in their communicative competence. They defined it as the knowledge of verbal and non-verbal CSs employed to compensate for communication breakdowns in communication. Later on, in 1983, Canale expanded this term by including another function: to enhance the effectiveness of one communication, making his concept of strategic competence broader than the earlier concept introduced by himself and Swain in 1980. It should also be acknowledged that other scholars also came up with the concept of strategic competence (e.g., Bachman, 1990; Celce-Murcia, et al., 1995). However, these researchers' descriptions of strategic competence may not be suitable for the current

work. This is because Bachman's (1990) strategic competence is generally used to explain CSs in language testing while Celce-Murcia, et al. (1995) relates such competency with language instruction, which unfortunately is not the focus of this research. Meanwhile, Uso'-Juan and Martinez-Flor (2006) combine strategic competence with learning strategies, which again seems not to match this study's focus.

Of these, the application of Canale's (1983) strategic competence seems feasible for the current work for two main reasons: a) to overcome communication breakdown (Dörnyei & Thurrell, 1991), and b) to focus on message enhancement (Kasper & Kellerman, 1997). That means, first, that CS works as a compensatory device for learners to operate "to overcome specific obstacles in the process of communication" (Clennell, 1995, p. 6). Second, CS also functions as "message-enhancing communication strategies" (Ting & Lau, 2008, p. 20) or pragmatic strategies" (Sato, et al., 2019, p. 11), i.e., to negotiate non-understanding and achieve the understanding that might enhance communication effectiveness. The following section explains its origin and conceptualisation.

2.4 The Origin and Conceptualisation of Communication Strategies

This section commences with a brief description of the origin of CS followed by explanations about the three different approaches adopted by communication strategies, namely interactional, psycholinguistic, and the integrated approach; of these, I have adopted the integrated approach, with my reasoning for this being detailed in this section.

2.4.1 The Conceptualisation of Communication Strategies

Researchers began to raise the concept of second language CSs during the 1970s. In 1972, the term ‘communication strategy’ was coined by Selinker in his seminal paper on ‘Interlanguage’. In this paper, he discussed the “strategies of second language communication” (p. 229), one of the five central processes involved in second language learning. The nature of these strategies was also mentioned, though not in any great detail. In the same year, around the time that Selinker (1972) published his paper, another researcher, Savignon (1972) published a research report on CSs. In her report, she emphasised the significance of ‘coping strategies’ (the term she used for CSs) in the area of communicative language teaching and testing. In 1976, Tarone and colleagues published two studies that particularly focused on CSs. Further explanation about Tarone’s definition of CSs is given below.

2.4.2 Interactional Approach

Thus, Tarone (1980) defined CS from the interactional perspective. However, prior to introducing the definition of CSs, which is set within the interactional approach, Tarone, et al. (1976) proposed two definitions that emphasised the cognitive processes in target language reception and production (Smith, 2003).

DEFINITION ONE: “A systematic attempt by the learner to express or decode meaning in the target language (TL), in situations where the appropriate systematic TL rules have not been formed” (Tarone, et al., 1976, p. 78).

The notion of ‘systematic attempt’ used in the first definition was later criticised by (Tarone, 1980) as being unclear. It was also impossible to distinguish between ‘production strategy’ and ‘communication strategy’ in this definition (Tarone, 1980).

Due to these issues, another description to define CSs was later formed to replace this definition.

DEFINITION TWO: “A conscious attempt to communicate the learner’s thought when the interlanguage structures are inadequate to convey that thought” (Tarone, 1977, p. 195)

In this second definition, the notion of ‘systematic attempt’ is replaced with ‘conscious attempt’ to conceptualise CSs. However, Tarone once again argued that the use of the aforementioned term is insignificant, as it is impossible to measure and identify the degree of consciousness for each CS produced by the speakers. Eventually, in 1980, Tarone expanded the definition of CSs based on the interactional approach. She defined CSs as “mutual attempt(s) of two interlocutors to agree on a meaning in situations where the requisite meaning structures do not seem to be shared. (Meaning structures here would include both linguistic structures and sociolinguistic rule structures)” (p. 65). The criteria for CSs proposed by Tarone (1980) are presented in Figure 2.2 below.

1. A speaker desires to communicate meaning x to a listener.
2. The speaker believes the linguistic or sociolinguistic structure desired to communicate meaning x is unavailable or is not shared with the listener.
3. The speaker chooses to:
 - a. Avoid/not attempt to communicate meaning x .
 - b. Attempt alternate means to communicate meaning x .
 - c. The speaker stops trying alternatives when it seems clear to the speaker that there is shared meaning.

(Tarone, 1980, p. 65)

Figure 2.2 Tarone's (1980) communication strategy conceptualisation

Looking at the definition of CSs offered by Tarone (1980), they are viewed as an aid utilised “in a joint negotiation of meaning in situations where both interlocutors are attempting to agree as to a communicative goal” (Abunawas, 2012, p. 178). Overall, in my opinion, communication from the interactional approach is about a joint effort among speakers to accomplish a communicative goal, and CS within this framework is about using CS cooperatively among speakers in communication.

2.4.3 Psycholinguistic Approach

Apart from the ‘interactional’ perspective proposed by Tarone (1980), another approach, ‘psycholinguistic approach’ introduced by Faerch and Kasper (1983) has also been constantly used to define CSs. In defining CSs, these scholars have localised CSs within the model of speech production which emphasises planning and execution of speech production during oral communication. CSs, for them, are viewed as “potentially conscious plans for solving what to an individual presents itself as a problem in reaching a particular communicative goal” (Faerch & Kasper, 1983, p. 36). The term ‘individual’ rather than ‘learner’, used in this CSs definition implies that it is applicable to both native language and second/foreign language users (Faerch & Kasper, 1983). Based on Faerch and Kasper’s definition of CSs we, as speakers, typically have a communicative goal in oral communication, i.e., delivering messages to another person. The plan in this regard refers to the communication strategies that can be utilised by the speaker in reaching the communicative goal. If the speaker encounters a problem during the interactions, that is, due to inadequate linguistic command, communication breakdown might occur, which results in the speaker failing to reach the communicative goal. From there, we have two choices to overcome the

communication disruption. The first is to avoid the problem by adopting *reduction strategy* governed by avoidance behaviour. Using this strategy means we avoid the risk by changing the communicative goal. Secondly, we could plan to keep our communication goal by relying on *achievement strategy*, governed by achievement behaviour. This means that we accept risk, and try to tackle the arising problem by developing an alternative plan (Faerch & Kasper, 1983; Mariani, 1994). Figure 2.3, below, describes Faerch and Kasper's mechanisms in reaching a particular communicative goal.

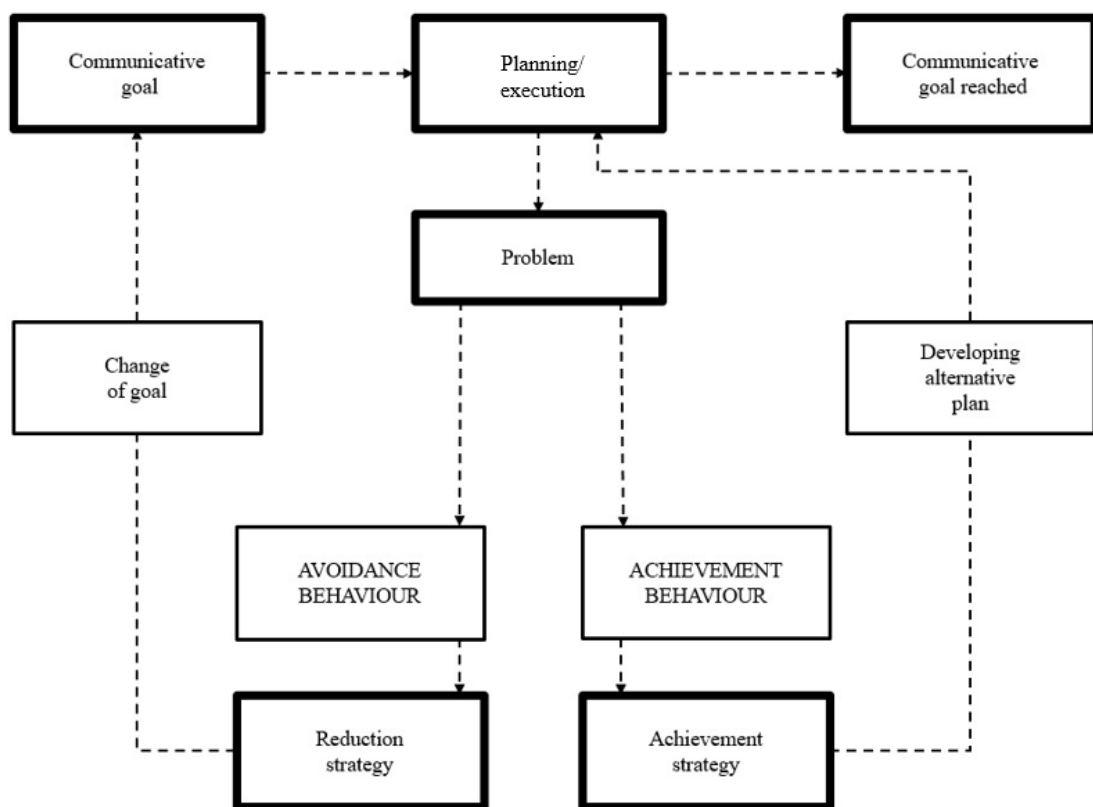


Figure 2.3 Faerch and Kasper's (1983) communicative goal mechanisms

In summary, Faerch and Kasper (1983) viewed CSs as a mental response within an individual, rather than as a joint response by two people in overcoming a communicative problem in the course of interaction. In addition to Faerch and Kasper, other researchers, particularly Bialystok (1990) and the Nijmegen Group (i.e.,

Bongaerts, Kellerman and Poulisse (1990) from Nijmegen University in the Netherlands) also conceptualised CS based on a psychological (Poulisse, 1990). However, in comparison to Faerch and Kasper's CS conceptualisation, Bialystok (1990) and the Nijmegen Group (1990) argued that their view on communication strategies was inherently about mental procedures and involved the cognitive process's deep structure of strategic language behaviour. For this reason, they suggested CS researchers should investigate the cognitive process underpinning the strategic language use (Dörnyei & Scott, 1997).

Bialystok (1990), in her model of language proficiency argued that CS “responds to the cognitive mechanisms operating on mental representations in linguistic processing” (p. 117). CS is explained primarily based on a language processing perspective, focusing on the development of two language processing components: analysis of linguistic knowledge, and control of linguistic processing. The first component, according to Bialystok (1990), is defined as “the process of structuring mental representations of language which are organised at the level of meanings (knowledge of the world) into explicit representations of structure organised at the level of symbols forms” (Bialystok, 1990, p. 118). Simply put, this component relates to the ability to make some kind of alteration to the content of the messages by exploiting knowledge of the concept, by giving a definition of a particular concept or object. The latter component refers to “the ability to control attention to relevant and appropriate information and to integrate those forms in real time” (Bialystok, 1990, p. 125). For instance, in conversation, we normally pay attention only to the meanings. However, sometimes, the formal aspects of the language like syntax or phonology are, too, given attention. During reading, we focus on formal properties such as the printed or written text. While speaking to a non-native speaker we may direct our focus to lexical choices,

whereas a listener may choose to opt for para and extralinguistic aspects of a message – gestures, kinesics – as this may aid message interpretation. “These changes in selective attention are central to language processing” (Kellerman & Bialystok, 1997, p. 33). Overall, these two processing components illustrate the ongoing process connected to mental representations during language learning and use. The Nijmegen Group (1990) (Bongaerts, Kellerman, and Poulishse), as I mentioned earlier, is also in line with Bialystok (1990), as they too support the psychological process underlying strategy use. For example, Poulishse (1993) conceptualised communication strategies within a coherent model of speech production. CS, according to her definition, is as follows. Compensatory strategies are processes, operating on conceptual and linguistic knowledge representations, which are adopted by language users in the creation of alternative means of expression when linguistic shortcomings make it possible for them to communicate their intended meanings in the preferred manner (Poulishse, 1990, pp. 192-193)

To summarise, the psycholinguistic approach presented above emphasises the individual’s communication behaviour. That is, solving a communicative problem is primarily an individual work rather than by joint effort. CS for psycholinguists is also about the internal and cognitive process of strategic language behaviour of an individual.

2.4.4 Integrated Approach

In addition to interactional and psycholinguistic approaches, another approach, known as the ‘integrated approach’, has also been evident in the area of CS. This approach proposed by Dörnyei and Scott (1997) has also been used to conceptualise CS. Under their integrated approach, CS is defined based on the combination of both

‘interactional’ and ‘psycholinguistic’ perspectives. Specifically, CS, according to Dörnyei and Scott (1997), are viewed as problem-management mechanisms in language communication that are able to resolve conflicts and accomplish mutual understanding in interaction (Dörnyei & Scott, 1997).

Among all the three approaches described in this section, the integrated approach by Dörnyei and Scott (1997) is considered comprehensive as it covers both the interactional and psycholinguistic, and which therefore makes it suitable for the present study. The elements of interactional and psycholinguistic perspectives contained within this approach also align with the nature of communication that consists both individual and interactive elements (Uztosun & Erten, 2014). Individual in this respect refers to mental processes experienced by the speakers to communicate, while interactive relates to the interaction which occurs between the speaker and the interlocutor. That means choosing the integrated approach allows me to explore intrapersonal communication, which is parallel to the CS involved within the individual mental processing and interpersonal interaction that relates to the cooperative use of CS between speakers. Another reason for adopting this approach is because I would be able to examine CS from a broader perspective as it integrates both the approaches discussed earlier. Based on the explanation given, I believe that the definition by Dörnyei and Scott (1997) can be deemed appropriate for the present study.

2.5 Taxonomies of Communication Strategies

The elaborated taxonomies used to analyse how language speakers convey meaning and messages have been highlighted in many theoretical and empirical studies of CSs (Dörnyei & Scott, 1997; Kost, 2008; Shih, 2014; Smith, 2003). These taxonomies, as accentuated by Dörnyei and Scott (1997), are the result of two traditional

theoretical perspectives of defining CSs by scholars: interactional (Corder, 1983; Paribakht, 1985; Tarone, 1977; Tarone, et al., 1976), and psycholinguistic (Bialystok, 1990; Dörnyei & Kormos, 1998; Faerch & Kasper, 1983). These two main groups of taxonomies consider CS research to be divided into two camps; the first focuses on investigating the ‘linguistic performance’ of the language speakers, while the latter prefers to examine and classify interlocutors’ ‘internal behaviour’. However, as described in the previous section (see section 2.4.4), another approach, namely the integrated approach as proposed by Dörnyei and Scott (1997), was later introduced to define CS. This approach, which integrates both interactional and psycholinguistic perspectives, resulted in a broader CS taxonomy.

Despite being categorised according to different camps - interactional, psycholinguistics, and the combination thereof - most of the taxonomies divide CSs into two different categories, namely *achievement* and *reduction* strategies (Dörnyei & Scott, 1997). This CS categorisation refers to the language speakers’ underlying behaviour whenever they face difficulties in communication. Achievement strategies refers to the strategies that speakers can employ to directly overcome their communication problem, which has occurred due to a language gap (Faerch & Kasper, 1983), whereas reduction strategies relates to the action of speakers reducing or abandoning the message they perceived to be problematic for them during conversation (Faerch & Kasper, 1983).

In this section, I will present the interactional-based taxonomy by Tarone (1980), and the psycholinguistic-based taxonomy proposed by Faerch and Kasper (1983). The integrated taxonomy (Dörnyei & Scott, 1997) that combined both

psycholinguistic and interactional perspectives, and which was chosen for the current work, will also be explained here.

2.5.1 Tarone's CS Taxonomy (1980)

Tarone's taxonomy is one of the most influential and widely cited taxonomies in communication strategies research. This taxonomy was produced based on her examination of nine adult ESL students' speech production in a picture description task in both their first (L1) and second (L2) languages. It has five main categories: paraphrase, borrowing, appeal for assistance, mime, and avoidance. Below is the taxonomy and examples of the CS introduced by Tarone (1980).

Table 2.1 Tarone's CS taxonomy (1980)

Tarone's Taxonomy of Communication Strategies (1980)	
<i>Paraphrase</i>	
Approximation	- use of a single target language vocabulary item or structure, which the learners know is not correct, but which shares enough semantic features in common with the desired item to satisfy the speaker (e.g., pipe for waterpipe)
Word coinage	- the learner makes up a new word in order to communicate a desired concept (e.g., airball for balloon)
Circumlocution	- the learner describes the characteristics or elements of the object or action instead of using the appropriate target language (TL) item or structure (e.g., 'She is, uh, smoking something. I don't know what's its name. That's, uh, Persian, and we use in Turkey, a lot of)
<i>Borrowing</i>	
Literal translation	- the learner translates word for word from the native language (e.g., He invites him to drink, for they toast one another)
Language switch	- the learner uses the native language (NL) term without bothering to translate (e.g., balon for balloon, tirtil for caterpillar)

<i>Appeal for assistance</i>	- the learner asks for the correct term (e.g., ‘What is this? What called?’)
<i>Mime</i>	- the learner uses non-verbal strategies in place of a lexical item or action (e.g., clapping one’s hands to illustrate applause)
<i>Avoidance</i> Topic avoidance Message abandonment	- the learner simply tries not to talk about concepts for which the TL item or structure is not known - the learner begins to talk about a concept but is unable to continue and stops in mid-utterance (Tarone, 1980, p. 419)

Tarone’s taxonomy refers to the interactional nature of communication, which is used to describe the surface structure of the strategies employed by the speakers (Little, 1996; Smith, 2003). Avval (2012), in her study, stated that Tarone had provided a clear and descriptive definition and examples of CSs in her typology. However, Tarone (1977) herself admitted that this taxonomy lacked generality as it was built for the purpose of analysing communication strategies used to refer to concrete items. For that reason, Poullisse (1987) believed that this taxonomy was unsuitable for application to different data, that is, “those elicited in oral interviews or in tasks that involved abstract concepts” (p. 142). Additionally, Abunawas (2012) also argued that Tarone’s typology was vague and had overlapping areas, as the boundaries set up to identify the strategy types and the distinctions between different strategies in this taxonomy seem ambiguous. However, despite the aforementioned criticism, Dörnyei and Scott (1997) accentuated that Tarone’s taxonomy was “still one of the most influential in the field” (p. 175), as is evident in the literature; CS researchers still utilise this taxonomy in analysing their CS data (e.g., Kongsom, 2016; Shih, 2014; Smith, 2003).

In summary, Tarone’s taxonomy was based on her investigation of nine ESL learners’ L1 and L2 speech production during a conducted task. This taxonomy which came with five main categories and subcategories are suitable for CS studies’ focusing

on the interactional nature of communication. Overall, this taxonomy seems not to fit my present study, which focuses on both individual and interactional communication. However, the considerable information gained from her research serves as further supporting material for other researchers working on the same issue. The chapter now turns to another influential CS taxonomy by Faerch and Kasper.

2.5.2 Faerch and Kasper's CS Taxonomy (1983)

Faerch and Kasper's (1983) taxonomy is another significant taxonomy that is frequently cited in CS studies (e.g., Hua, et al., 2012; Kongsom, 2016; Si-Qing, 1990). The example of this taxonomy and its classification of CS can be seen in Table 2.2 as presented below.

Table 2.2 Faerch and Kasper's taxonomy (1983)

Faerch and Kasper's CS Taxonomy (1983)
<p>(1) Avoidance</p> <p><i>Formal reduction:</i></p> <ul style="list-style-type: none"> a) Phonological b) Morphological c) Syntactic d) Lexical <p><i>Functional reduction:</i></p> <ul style="list-style-type: none"> a) Actional b) Modal c) Propositional <ul style="list-style-type: none"> - Topic avoidance - Message abandonment - Meaning replacement <p>(2) Achievement</p> <p><i>Compensatory strategies</i></p> <ul style="list-style-type: none"> a) Code switching b) Interlingual transfer c) Inter-/intralingual transfer d) IL-based strategies <ul style="list-style-type: none"> i) Generalisation

- ii) Paraphrase
- iii) Word coinage
- iv) Restructuring
- e) Cooperative strategies
- f) Non-linguistic strategies:

Retrieval strategies

(Faerch & Kasper, 1983, pp. 52-53)

As mentioned in the previous section (see section 2.4.3), Faerch and Kasper placed CSs within the model of speech production which consists of two phases, namely planning and execution. Whenever language speakers face problems in any of these two phases, they may opt for either avoidance or achievement behaviour. Avoidance behaviour leads to reduction strategy whereas achievement behaviour directs to achievement strategy. Specifically, speakers who want to avoid a communicative problem would opt for avoidance strategy, comprising of reduction strategies. Avoidance strategies offer speakers two types of reduction strategies, namely formal and functional. The first refers to the avoidance of target language rules of which the speakers are uncertain or cannot be accessed. Specifically, the speakers tend to avoid a linguistic form they had difficulty with at one of the four linguistic levels of phonology, morphology, syntactic, and/or lexical. As for functional reduction strategies, this refers to avoidance at actional, modal, or propositional levels. The first relates to speakers experiencing difficulties in performing specific speech acts, whilst the second refers to learners facing problems in making their utterances appropriate for politeness or social distance, and the final one is associated with problems related to the topic of the conversation. As displayed in the table above, there are three functional reduction strategies, namely ‘topic avoidance’, ‘message abandonment’, and ‘meaning replacement’ under ‘propositional reduction’. Topic avoidance, as stated by Faerch and Kasper (1983), “refers to the strategy of avoiding formulating goals which include topics that are perceived as problematic from a linguistic point of view” (p. 44). This

strategy is specifically used in connection with problems in the planning phase. As for message abandonment, this indicates that speakers stop in mid-sentence or cut short the initiated topic due to difficulty with the L2 form or rule faced during communication. This strategy, as opposed to topic avoidance, can be utilised in connection with problems in the execution phase. Finally, meaning replacement, as stated by Faerch and Kasper (1983) works “within the intended propositional content and preserves the ‘topic’ but refers to it by means of a more general expression” (p. 44). Having described the avoidance strategies, I now explain the next ones - achievement strategies.

Those resorting to achievement strategies are speakers who attempt to solve the communicative problem by developing an alternative plan (Faerch & Kasper, 1983). There are two major categories associated to achievement strategy. The first is compensatory strategy, which can be used to solve problems at the planning phase due to insufficient language resources, and the second is retrieval strategy, for solving any problem that might occur during the execution phase. Compensatory strategies consist of code switching, interlingual transfer, inter-/intralingual transfer, cooperative strategies, non-linguistic strategies, and IL-based strategies which comprise four subtype strategies, namely generalisation, paraphrase, word coinage, and restructuring. Each strategy is briefly explained below.

Code switching refers to switching from the second language (L2) to the first language (L1), or to any other foreign or other language that a speaker knows. This strategy can be applied at the level of a single word up to complete turns of a language. Code switching, when affecting single words only, might sometimes be referred to as ‘borrowing’ (Corder, 1983). As for interlingual transfer, this strategy refers to the combination of the linguistic features from interlanguage (IL) and the first language

(L1) (or any other languages different from L2). Interlingual transfer may occur at various levels, namely the phonological, morphological, lexical, pragmatic, as well as the discourse level. When interlingual transfer occurs at the phonological and morphological level, it is known as ‘foreignizing’ (Faerch & Kasper, 1983). As for inter-/intralingual transfer, this strategy is applicable when the L1 and L2 are similar.

Next is interlanguage (IL-based strategies) which consists of four subtypes: generalisation, paraphrase, word coinage, and restructuring. For generalisation, this strategy, as described by Faerch and Kasper (1983), refers to using a generalized IL item that “can convey the appropriate meaning in the given situation/context” (p. 48). This strategy complements ‘descriptions’ or circumlocution proposed by (Tarone, 1977) in her taxonomy. Word coinage refers to learners creating new IL words such as ‘airball’ for ‘balloon’ (Varadi, 1983). Similar to Faerch and Kasper (1983), Tarone (1980) also proposed word coinage as a strategy in her CS typology. As for restructuring, this strategy can be used to compensate for failure in the original plan. This is undertaken by attempting to get around the words via reconstructing their utterance. For instance, the learner wants to express that he is hungry. “My tummy - my tummy is - have (inaudible) I must eat something” (Faerch & Kasper, 1983, p. 50).

Faerch and Kasper (1983) also included cooperative strategies in their taxonomy. This strategy is similar to Tarone’s (1977) ‘appeal for assistance’ in which a learner appeals for help from their interlocutor using direct (e.g., asking a question - what is the name of this thing?) or indirect ways (e.g., using gestures), so that the problem could be solved on a cooperative basis. However, Faerch and Kasper (1983) emphasised that it is up to the speaker to either solve the problem themselves or signal their problem to their interlocutor so the problem can be solved cooperatively. This

means Faerch and Kasper believed that CSs are not exclusively about “mutually attempting...to agree on a meaning” (Faerch & Kasper, 1983, p. 51). In addition to cooperative strategies, they also came up with non-linguistic strategies: the use of mime, gesture, and sound imitation, which can be used by speakers during communication. And finally, for retrieval strategies, this CS can be adopted by a speaker when they experience problems during the execution phase. Specifically, Faerch and Kasper (1983) mentioned that one may sometimes have difficulties in retrieving a specific IL item that they already know.

Overall, Dörnyei and Scott (1997) and Poulisse and Schils (1989) highlighted that Faerch and Kasper’s taxonomy is more detailed and comprehensive than Tarone’s. This is due to Faerch and Kasper’s psycholinguistic framework, which allows the CSs to be classified into categories rather than merely listing them (Smith, 2003). Both of the taxonomies have similar subtypes, but the definitions and examples provided in Faerch and Kasper’s taxonomy are unfortunately unclear (Dörnyei & Scott, 1997). This is supported by Bialystok (1990), who commented that there is no clear distinction between formal reduction and functional reduction. From her point of view, the use of formal reduction may result in the use of functional reduction in communication. To illustrate, if a speaker uses lexical formal reduction because they do not have the target word “mushroom” in their L2 linguistic repertoire, they may utilise function reduction to avoid discussing “edible fungi” (Bialystok, 1990, p. 43). Despite being labelled as more of a comprehensive taxonomy than Tarone’s, Faerch and Kasper’s taxonomy, which is derived from a psycholinguistic perspective, unfortunately seemed not to be appropriate to my current work, which sees CSs as a combination of psycholinguistic and interactional approaches.

Generally, I have provided explanations of the interactional-based CS taxonomy by Tarone (1980) and the psycholinguistic-based CS taxonomy by Faerch and Kasper (1983). Having explicated this taxonomy, the next part will focus on Bialystok’s 1990 CS taxonomy.

2.5.3 Bialystok’s CS Taxonomy (1990)

Bialystok (1990) conceptualised two principal classes of CS in the process-oriented approach, namely analysis-based and control-based strategies. Her taxonomy is as presented in Table 2.3 below.

Table 2.3 Bialystok’s CS Taxonomy (1990)

Bialystok’s CS Taxonomy	
Analysis-Based Strategies a) Circumlocution b) Paraphrase c) Transliteration d) Word coinage e) Mime	- Conveying the structure of the intended concept by making explicit the relational defining features
Control-Based Strategies a) Language switch Ostensive definition (e.g., pointing to real objects) b) Appeal for help c) Mime	- Switching from the linguistic system being used and focusing instead on some other symbolic reference system that can achieve the same communication function

(Bialystok, 1990, pp. 132-134)

As displayed in the taxonomy, there are two major types of CS, namely analysis-based strategies and control-based strategies, along with a number of associated subcategories. Bialystok (1990) defined analysis-based strategies as “an attempt to convey the structure of the intended concept by making explicit the relational defining features” (p. 133). The strategies included in the analysis-based strategies, such as

circumlocution, paraphrase, and word coinage, relate to incorporating distinctive features into the expression, while mime is used to convey important properties. As for control-based strategies, this refers to manipulating “the method of expression by integrating resources from outside the L2 in order to communicate the intended message” (Smith, 2003, p. 33).

Bialystok’s taxonomy (1990) shares some similar aspects to the Nijmegen Group taxonomy (1990). To be specific, the analysis-based strategies in the Bialystok taxonomy are similar to the conceptual strategies offered by the Nijmegen Group in terms of the processing involved in their use - manipulating the knowledge of the concept of an item by providing its features or characteristics. However, the control-based strategies in Bialystok’s taxonomy contain more types of strategy in comparison to the Nijmegen Group’s linguistic strategies. Also, some of the strategies provided by Bialystok, namely circumlocution, word coinage, language switch, mime, and appeals for help, are similar to Tarone’s CS taxonomy.

In general, Bialystok’s taxonomy is similar to the Nijmegen Group’s taxonomy which is perhaps unsurprising as these researchers had the same point of view towards communication strategies. That is, CSs are intrinsically about mental procedures and the deep structures of cognitive structures of strategic language behaviour (Dörnyei & Scott, 1997). Since the Bialystok taxonomy merely emphasises an internal process of strategic language behaviour, its taxonomy is therefore considered unsuitable for my study, which supports both the psycholinguistic and interactional perspectives of CS. Having defined Bialystok’s CS taxonomy, I will now move on to discuss that of the Nijmegen Group.

2.5.4 Nijmegen Group's CS Taxonomy (1990)

Another taxonomy that is based on 'deep structure' or underlying mental processes is known as the Nijmegen Project (Poulisse, 1990). The taxonomy is portrayed below.

Table 2.4 The Nijmegen Group's CS Taxonomy

The Nijmegen Group's CS Taxonomy
Conceptual strategies (a) Analytic strategies (b) Holistic strategies
Linguistic strategies (a) Morphological creativity (b) Transfer

(Poulisse, 1990, p. 60)

This taxonomy is merely used to study compensatory strategies where the aim is to investigate the proficiency effect, that is, the relationship between the use of CSs in the first language and the target language, and the effectiveness of different types of CSs (Wang, 2013). These compensatory strategies are divided into two main categories: the conceptual, and the linguistic. Conceptual strategies refer to when speakers manipulate the concept of the target referent when explaining the item. This manipulation is accomplished through one of two subtypes: analytic strategies, and holistic strategies. Analytic strategies indicate that speakers choose and articulate the specific properties of the target item, and this is consistent with Bialystok's notion of analysis of knowledge. For instance, 'this one is used to wipe off the dust' (target word is 'feather duster'). With regard to the example given, the properties related to the usage of the target item are intricate (Smith, 2003).

Holistic strategies, however, are those where speakers use a substitute referent that shares characteristics with the target referent, or which forms part of the same

category's hierarchy. To illustrate, '.... it's a snake' (target word is 'python'). For linguistic strategies, this implies speakers manipulating their linguistic knowledge through either morphological creativity or transfer. Morphological creativity occurs when a speaker creates new words that they believe to be comprehensible in the L2 to their interactant. This strategy is also a feature of other taxonomies, such as those of Tarone and Faerch and Kasper, and is known as word coinage. As for the final strategy, transfer, this refers to exploiting similarities between languages; it is about transferring either words or phrases from one language to the other and may also include using a third language to overcome limitations. This strategy, as discussed by Smith (2003), relates to aspects of Bialystok's cognitive control concept, Tarone's conscious transfer, which is language switching, and some of Faerch and Kasper's diverse achievement strategies.

In general, the Nijmegen taxonomy is built upon a psycholinguistic perspective. As stated earlier, this taxonomy is specific and restricted to only lexical-compensatory strategies (Smith, 2003), and which would seem to be unsuitable for my study. This is because my study focuses on both perspectives of CS – the psycholinguistic and the interactional. Overall, I have provided information about the Nijmegen taxonomy and, in the following section, Dörnyei and Scott (1997) taxonomy, which is the combination adopted in this study, is elaborated upon.

2.5.5 Dörnyei and Scott's CS Taxonomy (1997)

A taxonomy proposed by Dörnyei and Scott in 1997 is arguably the most comprehensive taxonomy as it integrates all the taxonomies in the field of CS. Hence, it is common to see CS researchers utilise this taxonomy in their studies across the literature (Hung & Higgins, 2016; Kost, 2008). Specifically, this taxonomy is built

based on two combined perspectives – psycholinguistics and interactional. It also comes with two categories of CS, *achievement* and *reduction* strategies, as shown in Table 2.3. Dörnyei and Scott (1997) allocated message abandonment and message replacement to the *reduction strategies* category while other CSs are categorised as *achievement strategies*. Their taxonomy also categorised CS according to the manner of problem management, i.e., how CSs help resolve conflict and contribute to mutual understanding in L2 communication (Dörnyei & Scott, 1997).

This taxonomy is also divided into three categories: direct, indirect, and interactional strategies. As mentioned by Dörnyei and Scott (1997), direct strategies refer to any strategies used when speakers lack resources such as a word or the vocabulary of the target language. These strategies also act as a tool to assist speech production. In contrast, indirect strategies are not problem-solving devices, but are rather used to establish a condition to achieve mutual understanding; preventing breakdowns and keeping the communication channel open via the use of fillers, hedges and repetitions. Even though indirect strategies are not meaning-related, they play an important role in communication (Dörnyei & Scott, 1997). In addition, interactional strategies emphasise the cooperative exchange between two or more interlocutors that is needed to overcome problems or any breakdown during interaction. It is, for example, exemplified by requesting for, and providing, clarification, which leads to a mutual understanding (Dörnyei & Scott, 1997). In addition, they also proposed new CSs to be included in their taxonomy; these CSs are unique, unlike any other CSs provided in other predominant taxonomies. The new CSs are use of similar-sounding words, feigning understanding and requesting a repetition. The CS taxonomy by Dörnyei and Scott (1997) is presented below.

Table 2.5 Dörnyei and Scott's CS Taxonomy (1997)

Dörnyei and Scott's (1997) Communication Strategies Taxonomy	
Direct	Message abandonment Message reduction Message replacement Circumlocution Approximation Use of all-purpose words Word coinage Restructuring Literal translation Foreignizing Code switching Use of similar sounding words Mumbling Omission Retrieval Mime/Paralinguistic Self-rephrasing Self-repair Other repair
Interactional	Appeals for help Comprehension check Own-accuracy check Asking for repetition Asking for clarification Asking for confirmation Guessing Expressing nonunderstanding Interpretive summary Responses
Indirect	Use of fillers Repetitions Verbal strategy markers Feigning understanding

Among the taxonomies presented earlier, that by Dörnyei and Scott (1997) was adopted to analyse and code the CSs produced by the participants for the current study. This is because this taxonomy integrates both interactional and psycholinguistic approaches, which make it a comprehensive taxonomy compared to others that were

constructed based on either an interactional or psycholinguistic point of view (e.g., Faerch & Kasper, 1983a; Tarone, 1980). The inclusion of both approaches in this taxonomy is apparently in alignment with the concept of human communication that consist of both interactional and individual elements (see 2.1). The integration of both approaches in this taxonomy further highlights its comprehensiveness as a CS taxonomy, making it the most suitable taxonomy for the present study. Furthermore, this taxonomy also offers CSs that work as problem-solving devices to compensate for communication difficulties and pragmatic-based strategies that encourage message enhancement that aligns with Canale's (1983) strategic competence, indicating that this taxonomy is appropriate for the study. This taxonomy also comes with two categories of CS strategies, *achievement* and *reduction*, indicating it to be a complete taxonomy which again suggests that this taxonomy is the correct taxonomy that should be used to analyse CS in the present study.

Overall, based on the justification provided earlier, I anticipate that Dörnyei and Scott's (1997) CS taxonomy is indeed the most appropriate one that can be used to analyse CSs of the present study.

However, Kost (2008) argued that the taxonomies selected may somehow not be helpful in dealing with the rich data that the participants provide. This has been proven by Omar, et al. (2012) when their study combined both Dörnyei and Scott's (1997) and Smith's (2003) taxonomies to analyse their CSs data. Si-Qing (1990), on the other hand, proposed his own taxonomy that suited his concept-identification task in a study on CSs among EFL Chinese learners. In Shih's case (2013), the study of CSs in a 3D virtual environment (henceforth VEC3D) context provided a variety of data, some of which were not available in the current taxonomies provided. Therefore, new subcategories were modified and added to the taxonomies in order to analyse the data.

In this current study, Dörnyei and Scott's (1997) taxonomy, as explicated earlier, was considered as the most comprehensive CS taxonomy, and for that reason it was used as guidance to analyse my data. However, similar to the previous studies mentioned above, the taxonomy by Dörnyei and Scott (1997) was somehow not that useful up to a point to analyse the new form of CS, e.g., Google Search, Google Translate, Google Images, that emerged from my data. Therefore, the taxonomy has been expanded and modified to suit the rich data gained from my participants.

2.5.6 The Multimodal CS Taxonomy

The taxonomy developed for the current study was named the Multimodal CS Taxonomy (MCS) which I will explicate here. It is crucial to discuss this taxonomy as it is considered to be a key contribution of this thesis as it adds digital CSs to the CS taxonomy. This taxonomy is displayed below.

Table 2.6 Multimodal Communication Strategies Taxonomy (MCS)

Traditional Communication Strategies		
Direct Message abandonment Message reduction Message replacement Circumlocution Approximation Use of all-purpose words Word coinage Restructuring Literal translation Foreignizing Code-switching Use of similar-sounding words Mumbling Omission Retrieval Mime/ Paralinguistic Self-rephrasing Self-repair Other repair Giving suggestions	Interactional Appeals for help Comprehension check Own-accuracy check Asking for repetition Asking for clarification Asking for confirmation Guessing Expressing nonunderstanding Interpretive summary Responses	Indirect Use of fillers Repetitions Verbal strategy markers Feigning understanding
Digital Communication Strategies		
Google Search Google Translation Google Images Global Positioning System Dictionary Mobile applications (Apps)		

In the MCS taxonomy, I have introduced two major types of CS, namely Traditional (TCSs) and Digital Communication Strategies (DCSs). Under the TCSs, I allocated all the three main categories of CS (direct, interactional, and indirect) and their subcategories originating from the Dörnyei and Scott (1997) taxonomy. One new CS, namely ‘giving suggestions’ was added under direct strategy. I decided to house this CS under direct strategy as it linked to self-reliant means. Undeniably, these main CS and

their subcategories varied in function. However, regardless of their differences, they have two elements in common; first, they are authentically produced by the speakers without having to rely on any technological devices. Second, they are commonly identified in face-to-face CS studies (e.g., Ghout-Khenoune, 2012; Hua, et al., 2012; Malasit & Sorobol, 2013). Considering these two similarities, I believe it is appropriate to house these three main CS under the category - Traditional CSs. Alongside TCSs, I also proposed a new CS category, which I named Digital Communication Strategies (DCSs). DCSs in the current work relate to the use of mobile devices by the interlocutors as communication strategies during interactions. Specifically, six types of Digital Communication Strategies, namely Google Search, Google Translate, Google Image, Global Positioning System (GPS), Online Dictionary, and Mobile Application (apps), were allocated under DCSs. Overall, I have described the MCS taxonomy and its major components - traditional and digital CS.

To the best of my knowledge, no CS taxonomies have explicitly included this type of CS in their taxonomies, such that the MCS taxonomy represents a potential contribution to the CS field. Unlike other CS taxonomies, the MCS taxonomy, which includes digital CSs, somehow acknowledges digital CSs are now part of human communication. The inclusion of digital CS in the MCS taxonomy further emphasises the importance of this type of CS as a tool for language speakers to overcome linguistic challenges and enhance communication. This taxonomy seems to align with Canale's (1983) strategic competence concept that emphasises both elements, making it an inclusive taxonomy.

In addition, practically all prior CS taxonomies, to my knowledge, were primarily established to detect CSs in face-to-face communication (offline) (Dörnyei &

Scott, 1997). Undeniably, those preceding CS taxonomies can also be used as guidance to classify CS in an online environment. However, the MCS taxonomy, which covers digital CSs, is deemed to be more practical to analyse CS offline and online than the earlier CS taxonomies. In other words, the MCS taxonomy can be regarded as a comprehensive taxonomy as it has an additional type of CS that enables the identification of CS in a variety of communication contexts. Thus, based on these provided explanations, the MCS taxonomy can be considered to contribute to the body of CS knowledge.

To summarise, I have thoroughly described the relevant CS taxonomies in this section. These taxonomies, as argued by Bialystok (1990), might “differ primarily in terminology and overall categorizing principle rather than in the substances of the specific strategies” (p. 195). This means that existing taxonomies share more or less similar CSs’ conceptualisation and overlap considerably (Dörnyei & Scott, 1997). Thus, in my opinion, researchers may choose any taxonomies that suit their research study. In my case, I decided to opt for Dörnyei and Scott’s (1997) CS taxonomy as detailed above. However, as previously stated above, this taxonomy could not accommodate the emergent CSs that surfaced in my data, resulting in the development of the MCS taxonomy in the present study.

This section marks the final aspect of strategic competence. The next part explicates Pragmatics and its connection with strategic competence.

2.6 Pragmatics

This section introduces and discusses ‘pragmatics’, which interweaves with the focus of my research: strategic competence. The first section begins with a brief

explanation of the history and development of pragmatics. I then discuss its definitions and importance relating to language and communication. The significance of incorporating a section on pragmatics into my study is also highlighted here. The final section discusses pragmatic competence and the theoretical frameworks on which research into pragmatics has been based.

2.6.1 A Brief History and Development of Pragmatics

The term pragmatics was first coined by a language philosopher named Charles Morris in 1938. This term originates from the Greek word *pragma*, which means to act (Arif, 2013). In brief, Pragmatics is about how humans use language in communication (Leech, 1983). It has evolved for decades and is now known as an independent discipline in linguistics. Mey (2001) highlighted that pragmatics as a field of study emerged in the late 1960s and early 1970s, which resulted from the paradigm shift from theoretical grammar to the language users' paradigm. Initially, pragmatics was not an established field and only covered issues that could not be positioned into other linguistics areas (Leech, 1983). However, in the late 1970s and early 1980s, researchers began to gain more interest in studying language use and context, leading to pragmatics finally being recognised as an independent linguistic discipline in its own right (Penarroja, 2020).

Two prominent pragmatics figures, namely Leech (1983) and Levinson (1983), have been recognised as having formulated and elaborated the theoretical system and key concepts of this notion in their books *Principles in Pragmatics* (1983) and *Pragmatics* (1983), respectively (Penarroja, 2020). Three years later, *The International Pragmatics Association (IPrA)* was set up by scholars, which marked an essential step in the further development of pragmatics study with the field continuously growing and

receiving ongoing attention from different researchers (Mey, 2001). Huang (2014), in agreement with Mey (2001), mentioned recently that pragmatics is arguably “one of the most vibrant and rapidly growing fields in contemporary linguistics and the philosophy of language” (p. 1). As he further noted, this discipline has also been the primary area of interest among researchers from other fields (e.g., cognitive science, artificial intelligence, language pathology) (Huang, 2014).

I have provided a brief overview of pragmatics and its evolution as a linguistic discipline. I have also introduced several pioneering and contemporary scholars of pragmatics who have contributed to the field’s advancement. The following section discusses the definitions of pragmatics.

2.6.2 Definition(s) of Pragmatics

Levinson (1983) is one of the prominent pragmatics scholars to attempt to resolve the issue of the ambiguity encircling the pragmatic concept, which can be seen in his book, *Pragmatics*. He spent most of the first chapter reviewing this notion’s definitions which, in my opinion, implies that it is impossible to agree on one definition for this concept. Crystal (2010) and Laughlin, et al. (2015) also argued that it is problematic to develop one unified definition of pragmatics, as this field overlaps with multiple other linguistic areas and consists of different aspects of language components and use.

Although pragmatics seems to be a notoriously complicated concept to define, Rose and Kasper (2001) and Laughlin, et al. (2015) highlighted that scholars, including pragmatists, linguists, and applied linguists, have tried to explain pragmatics based on their theoretical orientation, perspectives, and research aims. According to Thomas (1995), pragmatics conveys meaning in interaction created through the negotiation of

meaning between speakers and hearers and the context of utterances (e.g., physical, social, or linguistic contexts, and the meaning). Similarly, Yule (1996) emphasised that pragmatic studies come in four areas: speaker meaning, contextual meaning, listener's inferences and interpretations of utterances, and relative distance between interlocutors (p. 3). LoCastro (2003) agrees, claiming that pragmatics are characterised by these elements: meaning is created through interaction with speakers and listeners, context includes both linguistic (co-text) and non-linguistic aspects, choices made by language users are of main interest, constraints in the use of language in social action (who says what to whom) is important, and the effects of choices on co-participants are examined. In agreement with these researchers, Laughlin, et al. (2015) contended that pragmatics is about the meanings formed by the interactions of speakers in a communicative encounter, with the meaning substantially influenced by contextual elements.

Based on these researchers' descriptions, pragmatics is said to have four essential components: the user, context, interaction, and meaning. On a broad level, I can interpret that pragmatics is the study of human communication, focusing on comprehending the meaning produced by language speakers through interactions in certain circumstances. Pragmatics, while not the primary concept adopted to investigate language use in communication in my study, needs to be highlighted here because, first, the current work deals with people's communication; second, the speakers of my research created meanings through their interactions with other speakers; and finally, they primarily used languages for various purposes in communication which are influenced by contextual elements.

Now that I have explicated the definitions of pragmatics and its relevance to my research, I will describe the importance of pragmatics, as can be seen in the following section.

2.6.3 The Importance of Pragmatics

Leech (1983) proposed that learning language through pragmatics can help us understand the meaning of language itself, since this discipline focuses on how humans use language in communication. Likewise, Grundy (2008) highlighted that pragmatics deals with how humans produce and comprehend everyday language use, leading one to understand how communicators use language in communication. Mey (2001) also expressed a similar point of view to Leech (1983) and Grundy (2008) when he emphasised that pragmatics “is needed if we want a fuller, deeper, and generally more reasonable account of human language behaviour” (p. 12). Yule (1996), on the other hand, further explained that pragmatics, unlike other linguistic components (e.g., syntax and semantics), incorporate humans into the analysis, making it a distinct discipline. Specifically, Yule (1996) noted that pragmatics could be used to investigate people’s intended meanings and assumptions, purposes or goals, and actions (such as requests and refusals) when communicating.

Overall, I would argue that pragmatics helps us to understand a speaker’s meaning in communication, making it a noteworthy field. Now that I have briefly described the importance of pragmatics in communication, the notion of Pragmatic Competence and the relevant theoretical background will be discussed.

2.6.4 The Concept of Pragmatic Competence

Pragmatic competence is comprised of two subcomponents: pragmalinguistic competence, and sociopragmatic competence. These are two different yet interrelated subcomponents (Laughlin, et al., 2015). Pragmalinguistics, as defined by Leech (1983), represents “the more linguistic end of pragmatics” (p. 11). This competence is concerned with speakers’ use of various linguistic resources at their disposal in conveying specific communicative acts. For example, in making a request, one can employ linguistic resources such as modals, hedges, and questions to realise this specific pragmatic force. Simply put, pragmalinguistics is “rather language specific and more closely interrelated with grammatical knowledge” (Laughlin, et al., 2015, p. 6). Sociopragmatics, on the other hand, is the “sociological interface of pragmatics” (Leech, 1983, p. 10). It is about a speaker knowing the principles of pragmatics and how to apply them to appropriately communicate situationally, culturally, and socially. For instance, a speaker needs to know “the taboos, mutual rights, obligations, and conventional courses of action” (Roever, 2006, p. 230) that exist within a particular language community for them to communicate appropriately. Brown and Levinson (1987) also argued that a sociopragmatically competent speaker must be aware of sociocultural characteristics such as social distance, relative power, and degree of imposition to communicate effectively. These two components are necessary for a language speaker to successfully communicate pragmatically. That is, they must have the ability to analyse, choose, and “combine elements from these two areas in accordance with [their] illocutionary, propositional and modal goals” (Laughlin, et al., 2015, p. 6).

However, Faerch, et al. (1984) argued that language speakers might use communication strategies referred to as strategic competence whenever they face a problem in communication due to limited linguistic resources. The argument made by Faerch, et al. (1984) has recently gained the support of other scholars such as Celce-Murcia, et al. (1995) and Celce-Murcia (2007), in their highlighting that strategic competence could be used to overcome the inadequacy of other competencies in communication. Based on these researchers' statements, it is clear that strategic competence is interconnected with pragmatic competence (Celce-Murcia, 2007). The connection between these two competencies will be discussed in the following section.

2.6.5 The Theoretical Frameworks

Initially, pragmatic competence was not treated as an independent competence. It began with its inclusion under sociolinguistic competence in the communicative competence models proposed by Canale and Swain (1980) and Canale (1983). However, in 1990, Bachman became the first scholar who explicitly included pragmatic competence within his communicative competence model; *communicative language ability* (Bagarić & Mihaljević Djigunović, 2007). Subsequently, other scholars, Celce-Murcia, et al. (1995), Uso'-Juan and Martinez-Flor (2006) as well as Celce-Murcia (2007), also included pragmatic competence within their communicative competence models. However, Celce-Murcia, et al. (1995) and Celce-Murcia (2007) discussed this competency under actional competence and interactional.

Bachman's (1990) pragmatic competence comes with two subcomponents: illocutionary competence, and sociolinguistic competence. The former refers to using "the knowledge needed to perform language functions and speech act sets" (Uso'-Juan & Martinez-Flor, 2006, p. 17), whilst the latter deals with "the knowledge of

sociopragmatic factors such as participant and situational variables as well as politeness issues” (Uso'-Juan & Martinez-Flor, 2006, p. 17). Celce-Murcia, et al. (1995) and Celce-Murcia (2007) also defined actional competence and interactional competence in their CC models in a similar manner to Bachman’s (1990) subcomponents. Similarly, Uso'-Juan and Martinez-Flor (2006) established the idea of pragmatic competence, which includes these two components: the linguistics and sociolinguistics sides of pragmatics, implying that both are necessary to be a pragmatically competent speaker. However, these researchers, who also incorporated strategic competence in their CC models, concurred that communication strategies could overcome constraints in any language competence, indicating that each component is interconnected (Scarcella & Oxford, 1992; Uso'-Juan & Martinez-Flor, 2006). Additionally, Brown (2000) also acknowledged that strategic competence is useful in dealing with the functional aspects of communication, which further emphasises that strategic competence is indeed needed when a speaker is lacking either pragmalinguistic or sociopragmatic strategies during communication.

Overall, I have presented pragmatics and discussed the pertinent aspects of this concept. My thesis, in my opinion, would be incomplete if I did not address this concept here because my research is primarily focused on communication, speakers, interaction, meaning, and context, all of which come under the umbrella of pragmatics. However, it should be noted that the concept of context in my study differs from the context offered in pragmatics in general, in that mine focuses on the possible factors that influenced my participants to use CSs in communication. In contrast, a contextual factor in pragmatics focuses on the variables that should be considered in communication to deliver intended meaning in an appropriate manner in specific circumstances. Another important reason for including the concept pragmatic in my study is that there is a

symbiosis between this concept and strategic competence. As mentioned earlier, Faerch, et al. (1984), Celce-Murcia, et al. (1995) and Celce-Murcia (2007) have pointed out that strategic competence can be used to overcome limitations in all language competences, suggesting that each competence is linked to one another. For example, someone who lacks pragmatic competence, whether pragmalinguistic or sociopragmatic, would turn to strategic competence (SC/CS) during communication to ensure smooth communication between speakers (Brown, 2000; Uso'-Juan & Martinez-Flor, 2006). Therefore, I believe that it is important to include the pragmatic concept in this study as it is related to strategic competence, which happens to be the focus of my study.

The following section describes the existing CS studies in the context of EFL/ESL environments and the types of CS used by these learners in communication.

2.7 Previous Studies on CS

Many CS studies have been carried out by researchers in the context of EFL/ESL environments (e.g., Malasit & Sorobol, 2013; Suraprajit, 2017), and to examine the communication strategies employed by their participants, these researchers have opted for various taxonomies with some using those presented in the previous section. Their analysis of the data revealed that language learners have used a wide variety of CSs in interaction. However, despite presenting all the CSs in this section, I will only discuss the salient ones, such as circumlocution, code switching, paralinguistic strategy, appeals for help, asking for clarification, asking for confirmation, use of fillers, and feigning understanding, which are relevant to the findings of my study. The relevant literature related to newly found CS, which I refer to as digital CSs, is also explicated.

Regarding circumlocution, Abunawas (2012) has conducted a CS study among Jordanian EFL learners with the picture description task being used to elicit their CSs usage. In identifying the CSs produced by his respondents, Abunawas (2012) followed the criteria proposed by Bhaskaran (1988) and Khanji (1996). The analysis of his data revealed that the EFL participants used a variety of CSs with circumlocution as the highest employed strategy in interaction. Another researcher, Al Alawi (2016), on the other hand, undertook a CS study among Omani EFL of different proficiency levels studying at a university in Oman. They were asked to participate in the recorded picture description task and a semi-structured interview. The CS data were then analysed using taxonomies derived from the extant literature. His findings revealed that circumlocution was the second-most frequently employed strategy in the recorded picture description task, with the higher proficiency learners using more circumlocution as a CS compared to lower proficiency learners in communication.

As for code switching, Hua, et al. (2012), Awang, et al. (2015), and Rofiatun, et al. (2018) mentioned the presence of this strategy in their research. Hua, et al. (2012) conducted a study among Arab and Chinese learners of English of high and low proficiency levels using a self-report questionnaire and recorded oral discussion. Their analysis of the data using the three CS taxonomies, namely Tarone (1977), Faerch and Kasper (1983), and Willems (1987), revealed code switching to be the most frequently used strategy by their participants. Awang, et al. (2015) carried out non-participant observations on the real university admission interviews in English involving 29 Malay ESL learners from 20 interview sessions to study CS. Their analysis using Dörnyei and Scott's (1997) taxonomy revealed that code-switching was one of the most frequently used CS among the Malay ESL learners. Rofiatun, et al. (2018), on the other hand, observed the use of CSs among four pre-service Indonesian EFL teachers during oral

interaction with foreigners in natural settings. Similar to Awang, et al. (2015), they also utilised the same CS taxonomy to analyse the CSs used by their participants. Their participants, too, employed this CS extensively by alternating between English and Indonesian during their oral interactions with foreigners.

Abunawas (2012) and Uztosun and Erten (2014) have mentioned paralinguistic strategies in their research. For instance, Abunawas (2012) revealed that Jordanian EFL used various CSs, including using mime alongside verbal outputs in the conducted task. Uztosun and Erten (2014), who performed a CS study among Turkish EFL learners, randomly paired their participants to negotiate about two different stories with one as a storyteller and the other as interlocutor. Their analysis of the data using Dörnyei and Scott's (1997) taxonomy as guidelines indicated that Turkish EFL learners, similar to Jordanian EFL learners, also utilised mime together with verbal communication.

The appeals for help strategy, on the other hand, was evident in the studies of (Malasit & Sorobol, 2013; Nurliana, 2020; Uglá, et al., 2013a). For instance, Malasit and Sorobol (2013) analysed the CS used by Thai EFL learners using two tasks, namely oral interview and picture story narrative. The oral data were recorded and later examined using four different CS taxonomies, i.e., Tarone (1980), Faerch and Kasper (1983), Dörnyei (1995), and Dörnyei and Scott (1997). Their findings revealed that Thai EFL learners resorted to various CSs, including appeals for help during communication. Uglá, et al. (2013a) on the other hand, reported that their analysis of the questionnaire data adapted from Dörnyei and Scott's (1997) CSs taxonomy revealed that their EFL Iraqi learners frequently used appeals for help as a CS. Additionally, Nurliana (2020) explored communication strategies among seven university students studying the Dayak Ngaju language. She recorded the oral presentations performed by these students

and identified the CSs they used according to Celce-Murcia's taxonomy of CS. As evident in her data, appeals for help was identified as one of the more frequently used CSs by the participants whenever they faced problems in communication.

Regarding asking for clarification, this CS was identified to be employed by the participants of the studies by Kongsom (2016) and Baradeyah and Farrah (2017) in their communication. However, unlike the studies presented earlier, these research studies aimed to investigate the impact of teaching CSs on learners' English language communication. Kongsom (2016) mentioned that she taught the EFL participants ten communication strategies, with asking for clarification as one of them, for ten weeks. These CSs, as argued by many researchers (Kongsom, 2009; Lam, 2010; Maleki, 2010), are teachable and helpful in overcoming communication difficulties. The taught CSs were then analysed via four speaking tasks and a self-questionnaire report. The findings of the Kongsom (2016) study showed that students successfully utilised all ten CSs taught to them in the four speaking tasks. The questionnaire also noted a statistical increase of the ten taught CSs after the CS teaching instruction. Similar to Kongsom (2016), Baradeyah and Farah (2017) also examined the effect of teaching the asking for clarification strategy on their EFL learners' communication skills. The data collected pre-and post-questionnaire and pre-and post-speaking tasks indicated this strategy enhanced learners' speaking skills.

With regard to asking for confirmation, this strategy was evident in a study conducted by Thu and Thu (2016) among Vietnamese EFL learners. In detail, these researchers selected 20 non-English majors with an intermediate level of English proficiency to perform in an informal group discussion that lasted around 15 minutes. The conversation was recorded and later transcribed and analysed following the Malasit

and Sorobol (2013) CS guidelines. The subsequent findings indicated that these EFL learners resorted to a variety of CSs, including asking for confirmation in their communication. Similar to Thu and Thu (2016), other researchers, namely Malasit and Sorobol (2013) and Uгла, et al. (2013a), also showed that their participants utilised asking for confirmation as a CS in communication.

The use of fillers was reported by several researchers in their studies (Hardianti, 2016; Nakatani, et al., 2012; Uгла, et al., 2019; Uztosun & Erten, 2014). Uгла, et al. (2019) conducted a study among Iraqi EFL learners. The research focused on investigating the influence of proficiency level on CS usage, using speaking and interactive tasks to elicit CSs, the data from which were analysed using the Rababah (2002) CS taxonomy. From the tasks, it was revealed that fillers were used more frequently by both high and low proficiency level students. This finding is consistent with Uztosun and Erten (2014), who noted that fillers were the most popular CS strategy among their high-and low-level EFL participants, who mostly verbalised *err* in interactions. Nakatani, et al. (2012) showed that their participants also used fillers. Specifically, all three groups (low, intermediate, and advanced) frequently resorted to fillers such as *hmmm*, *well*, *in fact*, *as a matter of fact*, and *actually* in communication. However, among the three groups, the advanced group used fillers the most.

Another CS, namely feigning understanding, was evident in Suraprajit (2017) and Kaivanpanah, et al. (2012) studies. Suraprajit (2017) studied CS usage among Thai service providers when communicating with foreign customers. These participants, who Suraprajit (2017) randomly recruited, were asked to answer the Thai version of a questionnaire adapted from four different taxonomies, namely Tarone (1977), Faerch and Kasper (1983), Willems (1987), and Dörnyei and Scott (1997). He also prepared

additional, open-ended questions for the Thai participants to investigate other useful information pertaining to the CSs they employed. Suraprajit (2017) indicated that his participants employed various types of CSs, including feigning understanding when speaking to foreign customers. However, his participants considered this to be the least useful CS in communication. Kaivanpanah, et al. (2012) investigated the use of CSs, and the effect of proficiency, gender, and task type using a questionnaire developed based on Dörnyei and Scott's (1997) CS taxonomy. The findings indicated that their participants, of different levels of proficiency, used feigning understanding in communication. Feigning understanding was also used as a CS by low-proficiency Iraqi EFL learners in communication (Ugla, et al., 2019).

Omar, et al. (2012) investigated communication strategy usage among Malaysian ESL learners studying in a university. They were assigned to communicate in online discussions specifically held in Facebook groups. Interviews, retrospective sessions, and writing in reflective journals were amongst the other methods used to elicit CS from these participants. The CSs garnered from these ESL participants were then analysed based on combined taxonomies, namely those of Dörnyei and Scott (1997) and Smith (2003). The findings indicated that these Malaysian ESL learners employed a wide variety of CSs, including a new form of CS referred to as *digital media*. Specifically, they made use of Facebook features such as the 'like' button and tagging feature. They also utilised hyperlinks, and uploaded videos and pictures during online discussion. Other online tools, such as online translators (either the downloaded version or readily available on the website) were utilised. Additionally, Google Translate ([translate.Google.com](https://translate.google.com)) was also found to be the most commonly used tool followed by Citcat (citcat.com), and language translator software. Microsoft Word grammar and spell check, as well as online and digital dictionaries, were employed to aid their

communication. A study conducted by Hung and Higgins (2016) also revealed that their participants resorted to Google search, online dictionaries, and images in the text-based synchronous computer-mediated communication context. Suraprajit (2017) also reported the use of mobile phones in his research, which he regarded as an interesting finding. He mentioned that the Thai service providers utilised online dictionaries on their mobile phones to search for unknown words alongside their meanings and pronunciations while communicating with their customers.

Although the previous studies vary in research methodology, types of analysis, types of participants, languages involved, and other aspects, all language learners did employ communication strategies in communication, including circumlocution, code switching, paralinguistic strategy, appeals for help, asking for clarification, asking for confirmation, use of fillers, and feigning understanding similar to my participants, indicating CSs are indeed essential in communication and therefore worthy of investigation. Having explained all the relevant past studies of CS, I now discuss CS's context in the next section.

2.8 The Context of CSs

Over the past few years, studies of CSs have been undertaken in different contexts, with the majority completed in the face-to-face interaction setting (e.g., Bialystok & Fröhlich, 1980; Haastруп & Phillipson, 1983; Manzano, 2018; Uгла, et al., 2019), followed by in the computer-mediated communication (CMC) context (e.g., Chun, 1994; Smith, 2003; Omar et al., 2012; Shih, 2013). However, to date, studies of CSs using mobile devices are still lacking. This section will present the three contexts associated with the study of communication strategies, beginning with face-to-face, followed by computer-mediated communication, and then mobile devices.

2.8.1 Face-to-face Context

Face-to-face (henceforth FTF) interactions, as Norris (2004) has said, are obviously multimodal. Multimodal in the FTF context refers to the application of various communication modes (e.g., words, posture, body gestures, facial expressions, and so forth) by a person in the process of making meanings. As argued by Omar, et al. (2012) communication strategies studies have been extensively conducted offline, i.e., in face-to-face oral production, since the 1970s.

One example given is the research carried out by Bialystok and Fröhlich (1980), who happen to be among the more renowned CS researchers. The aim of their work was to examine the communication strategies used by learners when they lacked target language vocabulary. In the study, a picture reconstruction task was used as the elicitation method. The study participants, all of whom were French learners, were given the pictures and asked to describe them to a French native speaker such that the latter could correctly reconstruct them on a flannel board. The study found that learners employed second-language-based strategies, which, according to Bialystok and Fröhlich (1980), were the most efficient.

Haastrup and Phillipson (1983), on the other hand, conducted a study to investigate how learners coped in real-life communication situations. The participants involved were eight adolescent Danish English language learners who were at an intermediate level of proficiency. They were expected to interact with British people face-to-face about various topics of their everyday life. Based on the interactional data gained from the discussions, Haastrup and Phillipson summarised that interlanguage-based strategies were most likely to lead to mutual understanding. In contrast, first-language-based strategies were the least effective when employed during interactions.

On the other hand, Ting and Phan (2008) conducted a CS study among 20 Malaysian undergraduate ESL participants of high and low levels of proficiency. They were given a topic based on a social issue as the subject of their interaction. The results showed that both highly proficient and less proficient English language learners used the same amount of CSs. However, less proficient speakers were more inclined towards first language-based strategies and switched languages to overcome communication difficulties. In contrast, high proficiency learners used L2-based strategies and managed to negotiate meaning to maintain conversation.

These studies were among various examples of communication strategies being carried out in a face-to-face manner in the 1980s and at the end of the 2000s and, to date, this research context continues to be preferred by CS researchers. One such is Manzano (2018), who investigated oral communication strategies among adult Nepalese learners in the ESL context performing a picture-story telling task. Specifically, her participants utilised avoidance strategies the most when performing verbal CS and most of the non-verbal strategies were achievement strategies.

Ugla, et al. (2019) also conducted an offline CS study among Iraqi EFL learners. They attempted to investigate the influence of language proficiency level on the frequency of use and choice of L1/L2 during conversation and storytelling activities. The findings revealed that low proficient speakers frequently resorted to communication strategies compared to highly proficient speakers. Also, the low proficient students were prone to use L1-based strategies while the highly proficient ones preferred L2-based strategies. Another offline CS study was carried out by Zerrouki and Al-Khanji (2020) among Algerian EFL learners. In their study, they used two tasks namely scenarios and interviews to investigate the impact of task types on the

use of communication strategies among their participants. Findings revealed that their participants resorted to a wide range of CSs during communication.

In summary, the examples above are among CS empirical studies that were deployed offline. And, as indicated in these studies' findings, participants employed various CSs when communicating face-to-face. In this respect, I believe that performing face-to-face CS research is appropriate for CS studies, including the current work. However, instead of resorting to just one medium, I decided to couple face-to-face with mobile devices, which has contributed to language speakers using a broader range of CSs. This hybrid context is explained in the following section.

2.8.2 Computer-mediated Communication (CMC) Context

The computer-mediated communication context (hereinafter, CMC) refers to how people use networked computer systems to transfer, store, and retrieve information to communicate with each other (Yilmaz & Granena, 2010). CMC has two synchronicity forms: synchronous and asynchronous. Synchronous CMC refers to online real-time interaction between people, regardless of place and time (Smith, 2003). Furthermore, this form comes in two modes: text- and video-based. Text-based SCMC (e.g., instant messaging) integrates written discourse and spoken discourse with unique features such as lack of adjacent turns and simplified registers (Hung & Higgins, 2016), whereas video-based SCMC (i.e., video conferencing) is similar to face-to-face communication as it comes with features such as visual (i.e., eye contact) and vocal cues (e.g., intonation and gestures) (Hung & Higgins, 2016).

In comparison with synchronous CMC, asynchronous communication (e.g., emails, discussion boards) does have “a significant delay between the time the message

is sent and when it is received by the addressee” (Smith, 2003). As mentioned above, CMC is also incorporated with communicational modes, which makes it similar to FTF. However, the difference between the two is that the mediated communication contexts “include devices that are not normally employed in face-to-face, such as written transcription (e.g., subtitles) or a window with sign language translation” (Kenning, 2007, p. 45). In agreement with Kenning (2007), Kress (2000) and Stockwell (2010) also mentioned that today’s CMC is now equipped with multiple modes which language learners have widely utilised to aid their language learning and communication (Hampel & Stickler, 2012).

Extensive research into synchronous CMC has highlighted a number of benefits to using CMC contexts rather than face-to-face interaction. One of the benefits is increased learners’ participation during interaction as each learner has more talking time in a CMC context (Schenker, 2017) as well as increased quantity and quality of learner output (AbuSeileek & Qatawneh, 2013). CMC contexts have also created an environment with less psychological pressure to use a foreign language (Mackey & Gass, 2005; York, et al., 2021). Smith (2003), on the other hand, accentuated the usefulness of researching within CMC contexts: it is less intrusive to collect data using this medium compared to the traditional recording of face-to-face interaction. In line with these advantages, more recent works have been carried out in this area, one of which is the use of CSs. One of the early CS studies within CMC was carried out by Chun (1994) among beginner-level German learners. It was a longitudinal study with the data being collected over a two-semester period in 14 computer networking sessions. The students were given different topics to discuss online. Based on the findings, the students employed a variety of discourse modes. Some students’ electronic discourse resembled traditional writing, while other discourse modes closely resembled oral

interaction. In addition, discourse modes such as initiating and expanding on a topic, asking for confirmation, requesting clarification, greeting, and leave-taking were also found in the gathered data. Most importantly, the students communicated much more with each other via the CMC platform as compared to when they interacted in the traditional face-to-face classroom setting.

Smith (2003) also conducted a five-week study on CSs and task type effect in a CMC context. His study involved 18 adults learning English as a second language with mixed L1 backgrounds. In the study, participants used chat to complete two tasks: a jigsaw, and a decision-making task. These were completed once a week during class time. According to the findings of this research, a wide array of CSs were employed. Substitution, framing of a topic, fillers, and politeness markers were the most frequently used. However, *non-paralinguistic cues* such as eye contact, nods, and intonation pitch, which are commonly used in spoken discourse, were absent in CMC exchanges. In addition, the task type was found to have no effect on the use of CSs.

Another study on the use of CSs in a CMC context was conducted by (Omar, et al., 2012). In this particular study, 28 undergraduate learners of limited and modest English from a Malaysian university participated in an information-sharing task using Facebook groups. Similar to the study by Smith (2003), it was found that these learners also employed various functions of CS (e.g., approximation, code switching) to accommodate inadequate command of the language while interacting in a CMC context. In addition, a new form of CS, known as *digital media*, was extensively used among the participants, and which was explained in the previous section.

As detailed above, all these researchers performed CS studies in the context of text-based SCMC. Nonetheless, Hung and Higgins (2016) explored the use of CSs in

both text-based and video-based SCMC. Six Chinese-speaking learners of English were matched to complete four kinds of interactions with six English-speaking learners of Chinese. The findings later revealed that learners used a number of CSs, among which were such as social formula, code switching, inferential strategies, framing, self-correction, Google Search, online dictionaries, and images during their interaction in the text-based SCMC. However, Hung and Higgins (2016) also noted that they appeared to use these CSs differently in the two modes of SCMC, with text-based focusing on learning target-like language forms while video-based seemed to be effective in increasing fluency and improving their target language pronunciation.

I could summarise that the CMC context encourages participants to interact more during task-based CMC. In addition, the CMC platform also allows users to employ a wide array of CSs, including new types of CSs such as digital media. However, even though the CMC context provides features that are similar to oral communication, such as short turns, immediacy, and discourse informality (Yilmaz & Granena, 2010), “CMC systems have remained largely text-based” (Shih, 2014, p. 35). This ultimately distances it from real-life interaction. In addition, paralinguistic features, such as the eye contact, nods, hand gestures, and touch used in real-world interactions, are absent in a CMC context (e.g., Omar, et al., 2012; Smith, 2003).

As technologies change and evolve, a new synchronous CMC context known as virtual environment communication context (VEC3D) has emerged (Shih, 2014). This closely resembles face-to-face interaction. A VEC3D, which incorporates multimodal CMC, was constructed by the Computer Vision and Virtual Reality Laboratory (CVVR Lab) to study CS employment among participants (Shih, 2014). This multimodal environment was accessible on the Internet, and provided numerous channels and tools,

including text-based and audio-visual-based synchronous CMC, user-controlled avatars, and virtual objects. In addition, VEC3D also improved multimodal communication, including verbal, non-verbal, and emotional expression, as well as social interaction and multimodal collaboration during task-based CMC. A webcam integrated into the VEC3D was used to capture the facial expressions and body movements of individual users; these were transmitted over the Internet. Thus, participants could see avatars that represented them, while other users could view video feeds that showed facial expressions and body language. The participants included two graduate and three undergraduate non-native English language learners with similar cultural backgrounds and learning experiences. These participants conversed with a native English-speaking Canadian instructor. There were two tasks: open-ended discussion and role-play, as conducted within the VEC3D using multimodal communication tools. Based on the findings, the participants employed various types of verbal and non-verbal CSs to facilitate multimodal communication. Overall, the multimodal system supplied a diverse range of options for language learners and supported the use of CSs. The use of the VEC3D was also crucial, as it served as an optimal context for EFL learners to use multiple CS modes to maintain a conversation (Shih, 2014).

In recent years, researchers have been trying to create online contexts that resemble face-to-face interaction. For instance, the VEC3D used by Shih (2014) was said to be able to improve the efficiency of communication, as it involved both aural and visual transmission of meaning, similar to what we have in face-to-face human interaction. In addition, the inclusion of video allow participants to feel reassured by the presence of their partner's image, which eventually made communication and comprehension successful (Yamada & Akahori, 2007). The availability of the

interlocutor's image also created an awareness of social presence and encouraged a more active and effective interaction in a target language environment (Ko, 2012; Yamada, 2009; York, et al., 2021). VEC3D has the potential to improve communicative efficiency as a result of its ability to provide for aural and visual transmission of meaning, similar to what would be found in face-to-face human communication. From the explanations given by these researchers, I have assumed that face-to-face context appears to be the best environment for communication strategy studies, and this has been acknowledged by the researchers by them trying their best to build an online environment known as VEC3D, which offers aural and visual transmission of meaning, close to what is present in face-to-face human communication.

In my opinion, the CMC context, similar to face-to-face, is indeed today an essential human communication medium. Therefore, exploration of the use of CS in CMC should be carried out by researchers. However, considering that both mediums are vital for human communication, I, therefore, decided to incorporate these two environments into my research by exploring the use of communication strategies, including the use of mobile devices as one of the CSs among those adopted by language learners face-to-face. By doing so, I was able to identify various kinds of CSs utilised by them when they communicated face-to-face, simultaneously capturing the CSs derived from their mobile devices when they spontaneously used these tools to communicate in the elicitation tasks. The combination of these two mediums (hybrid CS context) in my study was believed to add richness to the findings regarding the use of CSs in communication, and at the same time making my study a little different from the CS studies that have been conducted in the CMC context.

2.8.3 Mobile Devices

Mobile devices are now embedded into people's daily lives and are used across locations for various purposes (Mullan & Wajcman, 2019). The adoption of mobile technologies is now rapidly expanding in educational settings, from kindergarten to higher institutions and this is not surprising, because the use of digital technologies is now a central part of most forms of modern educational provision and practices (Selwyn, 2017). This trend can indeed be seen within much of the existing literature in the area of mobile learning studies (e.g., Kayapinar, et al., 2019; Metruk, 2021; Sherine & Seshagiri, 2020; Wu, 2019). For example, a study by Wu (2019) shows that Chinese university students generally have a positive attitude towards the use of mobile devices in learning. They have used MALL both by themselves and at the initiative of the teacher. In general, mobile devices can provide them with a unique experience of seamless learning without time and place constraints. They also appreciated the value of mobile devices for their learning and used them to create more personal learning spaces for themselves. In addition, Kayapinar et al. (2019) conducted another study on mobile device use among Turkish university students. These researchers conducted an experimental pretest-posttest with a control group design among these two groups to investigate how tablet use affects students' mastery of grammar knowledge. The results show that there is no significant difference between the grammar performance of the students in both groups. These results were also cross-checked with the views of the teacher and the students in the experimental group on the use of tablets in the classroom. The teacher emphasised the impact of tablet use on learner autonomy, digital distraction and network connectivity, while the students stated that tablets can be a supplement but should not replace basic course materials such as textbooks and workbooks. Sherine and Seshagiri (2020), on the other hand, examine the effects of interaction and informal

learning in a WhatsApp group on mobile devices among 110 engineering students on their linguistic skills such as a) fluency and coherence, b) lexical resources, c) grammatical range and accuracy, and d) pronunciation. Their study's results indicate a statistically significant difference in their participants' speaking skills. They even responded positively to the use of Whatsapp as a means to practise speaking and to the improvement in their speaking skills in relation to the previously mentioned aspects.

Overall, I have explained the use of mobile devices in education and language learning as the basis for this study, which also focuses on mobile devices. Since the use of this device seems to be beneficial in these areas, it can be assumed that the use of it can also be useful in the field of CS studies and therefore more studies need to be conducted in this area, as along the lines of the present study. Nevertheless, there are undeniably already CS studies using mobile devices, albeit somewhat differently from my study, which is explained in more detail in 2.8.3 (a) (viii) paragraphs 4 to 7.

2.8.3(a) Characteristics of Mobile Devices

There are different types of tools that can be categorised as mobile devices, namely notebooks, personal digital assistant (PDA), tablet PC (e.g., iPad), smartphones (e.g., iPhone, Samsung), and other handheld devices (Göksu & Atici, 2013; Kukulska-Hulme, 2008). These devices vary from each other by their hardware and software capabilities, processor powers, memory sizes, screen resolutions, operating systems, web browsers, supported script languages, and supported file formats (Georgiev & Georgieva, 2007; Godwin-Jones, 2017). However, despite their differences, they share many of the same characteristics, as presented in Figure 2.4.

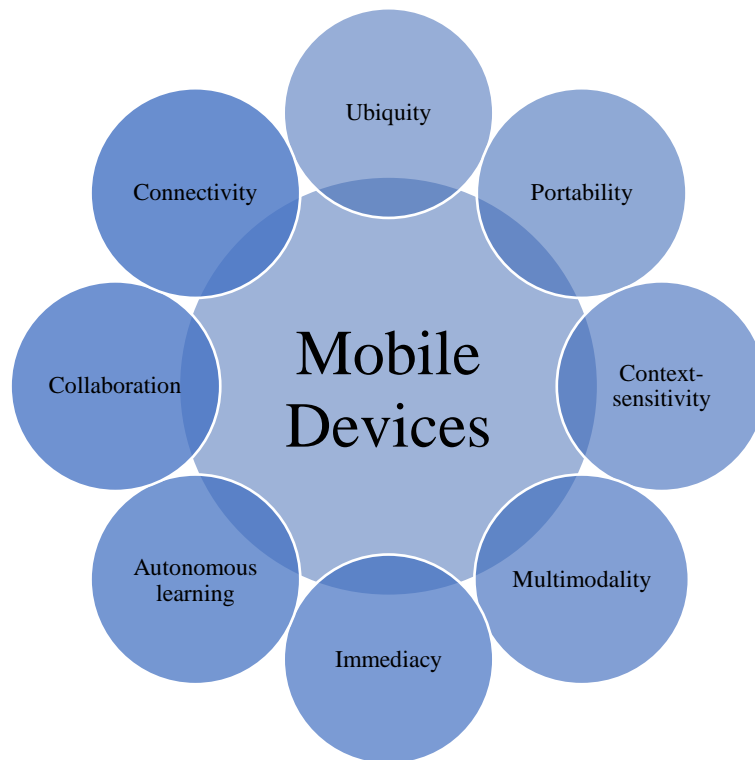


Figure 2.4 Mobile device characteristics

Source: Cavus and Ibrahim (2009); Göksu and Atici (2013); Kukulska-Hulme (2008); Ozdamli and Cavus (2011); Schofield, et al. (2011); Schrock (2015); (Dhawan, 2020); Honarзад (2019).

Figure 2.4 shows examples of mobile devices' characteristics that are associated with learning, as set out in the literature. It should be noted that there are many more characteristics related to mobile devices. However, for the present study, I decided only to present the characteristics related directly to the findings of my research presented in Chapter four.

2.8.1(a)(i) Ubiquity

The wireless technologies incorporated in mobile devices allow users to search for information regardless of place and time. For instance, learners can easily learn about or search for a subject of interest at or from any convenient and suitable sites, such as in buses, at home, in gardens and parks, restaurants, and even at marketplaces

(Cavus & Ibrahim, 2009; Kafyulilo, 2014; Kukulska-Hulme, 2016). Sandberg, et al. (2011) argued that learning via mobile devices can take place in both the “classroom and outdoors, across formal and informal settings” (p. 1336). Based on these researchers’ descriptions about ubiquity as being one of mobile devices’ affordances, I anticipate that anyone, especially language learners, could experience ubiquitous learning via the utilisation of mobile devices equipped with wireless connections. Looking at the literature, to date, many studies concerning the use of mobile technology have highlighted the ubiquity of mobile devices in language learning (e.g. Citrayasa, 2019; Dashtestani, 2016; Lai & Zheng, 2018).

Dashtestani (2016) recruited Iranian EFL learners to identify how they used mobile devices and their attitudes towards them. Based on his findings, in general, the Iranian EFL learners have a positive attitude towards mobile learning and used their mobile devices for non-academic and academic purposes across locations. Similarly, Lai and Zheng (2018) also revealed that their EFL foreign language participants used mobile devices for various purposes at any time and anywhere. Citrayasa (2019), who conducted a study to explore the use of a language learning application, *Busuu* among two junior high school students, on the other hand, revealed that her participants also used mobile devices across locations and during their spare time.

Overall, the studies presented above suggested that ubiquity, as one of the characteristics of mobile devices, may support language learning across locations. This notion, in connection with my study, seems to be useful in explaining the use of mobile devices as one of the CSs among my participants which emerged from my data.

2.8.1(a)(ii) Portability

Mobile devices are small and lightweight, allowing them to be easily carried and moved by users across locations and contexts (Göksu & Atici, 2013; Park, 2011; Quinn, 2000; Schrock, 2015). As highlighted by Schrock (2015), smartphones may have a computer-like capacity, but portability fundamentally separates mobile devices from desktops. In addition, Fujimoto (2012) further emphasised that portability is closely linked to ubiquitous learning, which is a unique mobile learning affordance. In my opinion, the concept of portability is firmly connected to ubiquitous learning due to the characteristics of mobile devices mentioned above – they are small and lightweight. These characteristics, which allow movability across places and between formal and informal settings, make ubiquitous learning possible for users (Hashim, et al., 2017; Lee, 2019).

Dashtestani (2016) revealed that one reason why the Iranian EFL learners preferred using mobile devices to learn English was due to the portability of this tool. Another study, by Jones, et al. (2018), also indicated that the affordance offered by mobile device portability made English language learning an easy task for the immigrants who participated in the MASELTOV project. The project, which was intended to support immigrants' inclusion and assimilation in their new cities, provided mobile resources to assist their linguistic, social, and cultural capabilities. The tools related to language learning in this project were a language learning app, a forum, a translation tool, and a serious game. As revealed in their findings, the study participants acknowledged utilising the language learning apps to support their learning anywhere and anytime. Additionally, a study by Alshammari (2020) also mentioned the notion of portability. He noted that his participants favoured mobile devices such as smartphones

and the iPad as they are more convenient than laptops or desktops as they are portable and easy to carry.

Overall, mobile devices' portability offered the language learners the opportunity to learn the language on the move as they could carry the required tool with them wherever they went. The explanations about the mobile phones' portability and past studies presented here are deemed useful to the present study because I could connect these with my findings, which revealed portability to be one of the reasons why my participants used mobile devices as a CS in my research.

2.8.1(a)(iii) Context Sensitivity

Mobile devices are equipped with a global positioning system (GPS), which provides both real and simulated data based on the user's current locality, environment, and time (Grifoni, 2009; Squire & Dijkers, 2012). The literature reveals that a considerable amount of the research concerning GPS and its usage has been undertaken in the field of communication and language learning. For instance, in communication studies, Vorderer, et al. (2016) and Jih-Hsuan (2019) explored the use of mobile devices in everyday activities among university students. In their findings, these researchers revealed that university students used the GPS function/navigation on their mobile phones as one of their mobile phone activities. Their findings, in my opinion, suggested that GPS was among the crucial mobile phone activities that made up students' everyday mobile phone usage. Squire and Dijkers (2012) also discussed the use of GPS by a participant in their study. The participant, who was a student, helped his mother navigate their journey in the right direction successfully using the GPS on his phone. In the interview, the student mentioned that he felt "more 'useful' when he has the phone because he can solve 'real' problems" (p. 454), such as finding the right route to a

location. Overall, Squire and Dijkers (2012), based on their research findings, anticipated that possessing mobile devices created a sense of empowerment among their users.

Sun, et al. (2015) were among the various researchers who studied the use of GPS capabilities in language learning. The application of GPS, including other context-aware technology such as QR codes in learning, is usually known as context-aware ubiquitous learning or mobile context learning (MCL) (Lee, 2019; Wang, et al., 2019). Sun and colleagues explored the use of a GPS sensor-based learning system to facilitate English learning among EFL university students. In the study, the students needed to learn about the different plants on campus in English using GPS capabilities on smartphones. Findings indicated that their participants showed that the system was easy and useful for them to learn about the plants in English. They were also found to collaborate and complete their task successfully (Sun, et al., 2015). Another study, by Freiermuth (2015) which investigated the use of GPS sensor-based learning among the female Japanese students taking a communication course revealed that they enjoyed learning English outside the classroom with the help of GPS. The participants also mentioned that they felt connected to other people around the world and were motivated throughout the task. Edmonds and Smith (2017) also conducted location-based mobile-learning games among recruited university students. Their findings indicated that the participants involved felt motivated and confident in interacting with locations, mobile content, and each other in the game.

Overall, the GPS capabilities equipped in mobile phones are beneficial for language learning due to their potential benefits, as exemplified here. GPS is not only

useful in language learning but also in communication, which I have addressed in Chapter five.

2.8.1(a)(iv) Multimodality

Mobile devices have multiple multimedia features (e.g., camera, video, apps) that allow their users to engage actively with them. For instance, one can record sound, take and edit photos, make and watch videos, write and send messages, use apps, listen to podcasts, and so on, via the different media accessible on the phone (Kukulska-Hulme & Shield, 2008; Ozdamli & Cavus, 2011). These different media on the phone, in turn, offer multimodal opportunities for communication, language learning, and other usages (Chen, et al., 2010; Schofield, et al., 2011). Multimodality refers to using multiple modes of communication which vary from linguistic, visual, spatial, gestural, audio, and other physical resources, including technology, to create meanings and understanding (Heberle, 2010; Kress, 2000; Royce, 2007; Stockwell, 2010). As Kress (2010) points out, each mode has its own specific task and function in the process of meaning-making. In line with Kress (2010), Marchetti and Cullen (2016) also argue that different modes have been identified as useful in different ways and in different contexts. For example, sounds can be used in language teaching to teach pronunciation, and videos are useful in physical education as they provide learners with images and movements to evaluate and remember (Lindell, et al., 2015). On the other hand, Norris (2004) argues that all modes have the potential to contribute equally to meaning. For this reason, he believes that social actors need to pay attention to and be aware of each mode and its functions to ensure that the meaning-making process is holistic. Campoy-Cubillo (2016) also suggests that individuals should focus carefully on the diversity of modes and their respective contributions to the message. This means that individuals

need to be aware of the different modes available and how they interact with each other, as some of them, when combined, can be more relevant and useful to the meaning-making process than others. As emphasised by Kress (2010), it is important for an individual to be able to choose the correct mode for communication as it is considered as a pivotal skill of multimodal literacies. In summary, the multimodality offered by mobile devices offers great advantages for language learners in the language learning process. However, learners need to be aware of the individual modes and their functions, and how to use the combined modes to achieve an optimal meaning-making process. Interestingly, as my findings have shown, multimodality benefits language learners' communication, as will be explained in chapter five.

The following are examples from previous literature dealing with multimodality and its relationship to mobile devices.

Lee (2014) explored the influences of multimodal learning practices on two Taiwanese EFL learners in an English writing course. Based on his findings, the participants were found to integrate images and visual art to support their writing effectively. One of the participants also referred to Google Translate to check his writing and vocabulary. They also showed improvement in the English course and increased motivation in writing activities. Lindell, et al. (2015) explored the multimodal use afforded by mobile devices in supporting EFL learners' school assignments, and the findings gained from their study revealed that students chose and used a wide variety of multimodality on mobile devices in completing their assignments. In the study by Dooly (2018), her participants, who were school children, used multiple modalities offered from the technology resources (e.g., laptops and smartphones) in the foreign language class. For instance, they used Microsoft Word on their laptops to complete the

task, watched cartoon videos on the laptops, texted their friend using WhatsApp on a mobile phone, using a voice translator on the mobile phone and utilised other modalities. Yeh (2018) also revealed that the participants of her study utilised a wide variety of multimodal modes afforded by technologies during the process of making a digital video for their final project. The use of these different modes of semiotic resources facilitated their English learning and developed their multiliteracies. Rahimi and Allahyari (2019), as well as Cárcamo, et al. (2016), conducted studies on the effects of multimedia-assisted explicit vocabulary learning strategy instruction on learners' EFL vocabulary. Based on these researchers' findings, learners who were taught vocabulary using multimodal modes showed improvements in vocabulary quantity and vocabulary test scores, which suggested that using multimodal modes when teaching vocabulary may enhance language learners' vocabulary acquisition. Overall, the advent of multimodality in language learning has continuously sparked interest among researchers to carry out related studies such as the use of mobile applications (e.g., dictionary, Duolingo, WhatsApp) as one of the multimodal modes to support language learning (e.g. Ahmed, 2019; Dahdal, 2020; Hamad, 2017; Loewen, et al., 2019; Metruk, 2021; Rosell-Aguilar, 2018).

In summary, the multimodality afforded by mobile devices offers great advantages for language learners in the language learning process. This characteristic, interestingly, as my findings revealed, benefits language speakers' communication, as will be discussed in Chapter five.

2.8.1(a)(v) Immediacy

Studies showed that mobile device users could obtain instant information on a daily basis about the subjects of interest via the application of this tool (Nalliveetil &

Alenazi, 2016; Yurdagül & Öz, 2018). Such activity is possible with mobile phones as, first, this tool is mainly characterised by immediacy, and second, mobile devices are equipped to use wireless networks and applications.

In Nalliveetil and Alenazi (2016) study, the participants of their research, who were among Arab learners majoring in English Language and Literature, utilised their mobile phones for English language-learning purposes. As such, they used their mobile phones to learn and improve English spelling, translate Arabic words into English, and learn new English words in the classroom. These activities, with the participants using mobile phones, happened due to the fact that this tool supports immediacy. Another study that revolved around immediacy as a mobile device characteristic was undertaken by Yurdagül and Öz (2018). The findings of their research indicated that Turkish EFL learners used smartphones for language learning, as this tool was able to give them immediate and easy access to information related to English language learning. Similar to the researchers mentioned above, Hazaea and Alzubi (2016) also pointed out immediacy as a feature of mobile devices. They carried out a study exploring the efficiency of using mobile technology in enhancing Arab EFL learners' reading practices. Hazaea and Alzubi (2016) mentioned that once their participants started using mobile devices to aid reading, they were able to extend their reading practices on their own and ask for only minimal help from their teacher during the reading practice in the classroom (e.g., asking for word meanings or parts of speech or pronunciation). This was because they were able to gain immediate feedback about their reading performances when practising reading using mobile phone features and applications.

Overall, mobile devices support immediacy. This means their users may be able to quickly access information at any time, anywhere, via the utilisation of mobile

devices. The information about immediacy as a mobile device feature is helpful to the discussion of my findings in Chapter five.

2.8.1(a)(vi) Autonomous Learning

Autonomous learning, as suggested by Holec (1981), is about learners having the ability to take charge of their learning. Kruk (2017) and Djoub (2016) further argued that these days, one could take up autonomy for language learning via the use of mobile devices. The reason for this is that smartphones are usually personally owned, and this allows people to concentrate on their personal goals (e.g., learning vocabulary) and make personal media decisions (e.g., listening to a podcast, using dictionary apps) (Kukulska-Hulme, 2016), meaning that learners are free to choose any learning materials that fit their styles and preferences in using mobile devices. This is in accord with the concept of personal autonomy by Benson (1996), which concentrates on the learner's individuality in terms of learning style and preference of learning activities.

Ever since mobile devices' appearance as a language learning tool, many researchers have investigated the student experience of learning with them. A common finding among these studies is that learners were able to engage in autonomous learning with the technologies afforded by mobile devices (e.g., Hilao & Wichadee, 2017; Ramamurthy & Rao, 2015; Varga, et al., 2020). Ramamurthy and Rao (2015) identified from their findings that the language learners performed autonomous learning via the application of smartphones. Furthermore, they raised the point that the learners were also able to boost their critical and creative thinking, at the same time managing to enhance their communication and collaboration skills via the use of smartphones. Hilao and Wichadee (2017) also carried out a study among Thai EFL undergraduate students to explore how they used mobile devices for English language learning. Based

on their findings, these participants showed that they autonomously utilised their mobile devices to communicate and learn the language. Another study by Varga, et al. (2020) highlighted autonomous learning in their findings. Their study, which was intended to identify the predominant language used in online use among Croatian and Slovenian undergraduate students, revealed that these two groups used English when autonomously engaging in receptive language activities, while the first language was used for productive and interactive skills. Despite using different languages online, these participants showed that they autonomously used their smartphone for multiple purposes ranging from communication, leisure, and learning English. Despite these benefits concerning autonomous learning using mobile devices, Dooly (2018) asserted that silence might also occur once the learners started using mobile devices.

In general, the studies suggest that mobile devices may promote autonomous language learning, thus supporting the discussion on ‘autonomy’ found in my data and explained in Chapter five.

2.8.1(a)(vii) Collaboration

The concept of collaboration originates from Lev Vygotsky’s social interaction principle in sociocultural theory which emphasises that learning occurs through interaction (Vygotsky, 1978). Thus, collaboration is about a joint effort or mutual engagement among participants in solving problems in a coordinated activity or task (Van der Meijden & Veenman, 2005; Vygotsky, 1978). When learners collaborate, they would be able to share and build knowledge as well as help each other to achieve their learning goals (Shadiev, et al., 2018). Collaborative learning compared to individual learning, as argued by Watanabe and Swain (2007), is advantageous as learners can share information and learn from their peers via collaboration. Also, learners can

develop their language skills during collaboration with their peers and others (García-Sánchez & Luján-García, 2016). Vygotsky (1978) further highlighted that human social and mental activities with their environment are shaped directly and indirectly via cultural artefacts created by humans over time (language, music) (Lantolf, 2000) and physical tools (books, mobile devices) (Warschauer, 2005), which aid knowledge construction. Santos and Ali (2012) asserted that mobile technology could promote communication and collaboration among language learners. In agreement with Santos and Ali (2012), Sung, et al. (2017) highlighted that mobile devices might enhance collaboration and make it more efficient, thanks to the current technologies of mobile devices (e.g., portability and mobility), which allow communication and collaboration among learners to happen at different places and times. The mobile devices' interfaces and functions that enable information sharing may also encourage active engagement and communication among the team members within a group, as they can continuously keep track of each other's work process and progress (Asabere, 2012; Sung, et al., 2017).

Many studies have highlighted mobile devices' influences on language learners' collaboration, such as detailed by Shadiev, et al. (2018). They revealed that their participants engaged in collaboration when learning using a multimedia learning system (MMLS) installed on their tablet PC. Specifically, they exploited the sharing function of MMLS to share their written notes and audio files recorded using the tablet PC with other participants. They were also able to review and listen to other participants' content via the sharing platform offered by MMLS. In addition to Shadiev, et al. (2018), Ramamurthy and Rao (2015), in their findings, also depicted that their participants gained collaboration skills via smartphones. The participants mentioned that they used smartphones to resolve conflicts among teammates during group work. They also

agreed that using smartphones during group work enhanced their teamwork. They even managed to establish a better understanding among teammates as smartphones provided features for personal chatting to resolve any arising problem during group work and at the same time keeping each other's work progress optimal.

Meanwhile, another researcher, Dooly (2018), found that her participants engaged in collaboration during the foreign language class. Interestingly, the teammates in the classroom texted their friend who was absent from school using WhatsApp to share, discuss, and together decide on their group name. Another group, as mentioned by Dooly (2018), also collaborated. They gathered around the laptop to collaboratively search, discuss, and decide on the best group name using the search engine as a resource.

Collaborative learning, with the computational capabilities of mobile devices, can happen in an online space anywhere, at any time (Chen, 2013; Hafner & Miller, 2011; Huang, 2019; Miller & Wu, 2018). A study by Chen (2013) involved ten intermediate English learners. His study, whose aim was to understand the use of tablets for the informal learning of English outside the classroom environment, revealed that tablets and other mobile technologies were ideal tools for creating an interactive, collaborative, and ubiquitous environment in which to learn language. Similar to Chen (2013), Miller and Wu (2018) created a discussion group on WeChat for the participants to engage beyond the classroom. The participants, who were among Chinese EFL university students, were found to scaffold and work collaboratively to construct meaning about the discussed topic, Chinese food, by exploiting the multimodal modes enabled by WeChat. Huang (2019), on the other hand, carried out a study looking at the efficiency of teaching Chinese as a foreign language (CFL) on WeChat. Ten CFL learners at the beginner level were recruited for this longitudinal study. The findings

indicated that these participants collaborated with Chinese native speakers and used the multimodal applications offered by WeChat in a similar manner to Miller and Wus' (2018) participants. The CFL learners also showed evident progress in Chinese usage as they had the opportunity to speak, share, and express their knowledge and ideas with regard to the discussed topics using Chinese with the native speakers in a collaborative fashion. Overall, these studies showed that language learners could collaborate with their peers and others using mobile devices.

Collaboration is presented in my literature review, as my data also showed the participants of my study collaborated using mobile devices while communicating face-to-face and online. Thus, the research presented above would aid me in discussing my findings in Chapter five.

The essential characteristics of mobile devices listed above have been proven to benefit learning. In addition to these, another pertinent mobile device attribute, connectivity, has also been highlighted by researchers in many mobile learning studies (Honarзад, 2019; Jones, et al., 2018).

2.8.1(a)(viii) Connectivity

As defined by Honarзад (2019), connectivity refers to the ability of mobile devices to easily connect to another device via wifi, Bluetooth, data collection devices, and shared networks so users can share their data directly and conveniently with each other. This particular characteristic, as argued by Dhawan (2020), is essential for mobile learning and indeed the lack this attribute results in an unsuccessful mobile learning process (Chen, 2013; Crane, et al., 2011). Alwraikat (2015) indicated that his participants, who were among EFL Jordanian university students, had trouble learning via mobile devices on campus as it was difficult to get an Internet connection inside the

building and other university facilities. Dashtestani (2016) similarly found that using mobile phones was not always convenient for her participants as wireless connections were not available at educational institutions. Meanwhile, Hashim, et al. (2018) noted that most of their participants acknowledged that lack of mobile network coverage was the major challenge they faced in learning via mobile phones. Apart from mobile network coverage, the availability of suitable mobile data plans that were affordable, offered wide coverage and fast connections was another barrier to utilising mobile devices (e.g., Crane, et al., 2011; Godwin-Jones, 2017).

Additionally, using mobile devices for learning may lead to distraction (Fernandez, 2018; Ugur & Koc, 2015). Ugur and Koc (2015) revealed that 80% of their participants agreed that they became distracted and missed the information about the course due to classroom phubbing⁴. They also acknowledged that phubbing in the classroom might negatively affect their overall academic performance. Whereas the majority of the learners in Fernandez's study believed that using mobile phones was effective for learning, despite this, his participants also acknowledged that mobile devices might cause classroom distraction. Overall, the studies described in this review suggested that mobile devices, even though they represented a useful learning tool, may cause distraction among language learners.

Regardless of the limitations, many studies found that mobile devices offer more advantages than disadvantages in learning as presented earlier (e.g., Lai & Zheng, 2018; Lee, 2014; Wang, et al., 2019). The employment of mobile devices does not only benefit learning, but it may also be useful in the area of communication strategies. The participants in Omar, et al. (2012) study were found to extensively utilise the new form

⁴ The act of using smartphones during lectures in the classroom (Nazir, 2020).

of CSs known as *digital media*. For example, they used Google Translate, videos and pictures to interact and to overcome their communication difficulties during interactions on Facebook. Other strategies, which are known as paralinguistic cues of CMC (e.g., emoticons and onomatopoeia), were also frequently employed in other CS studies undertaken in CMC mode using computers (e.g., Omar, et al., 2012; Shih, 2014; Smith, 2003). It is well known that these applications (digital media and paralinguistic cues) are not only limited to computers but also available on mobile devices.

To my knowledge, few studies have specifically explored mobile devices as CSs, thus exposing a potential gap that I have addressed in the present study. One such, however, was by Cheng and Lu (2016) who studied CSs among Chinese EFL learners in a mobile-assisted course. Instruments like oral communication sessions stimulated recall interviews, WeChat exchanges, and other tasks were used to elicit the participants' CSs throughout the Mlearning course. The findings of their study indicated that learners employed a wide variety of CSs in completing their learning tasks. Another CS study involving mobile devices was conducted by Sulaiman, et al. (2018) among Malaysian tertiary ESL learners. Similar to Cheng and Lu's (2016) study, Sulaiman, et al. (2018) also performed task-based activities in an Mlearning environment. Specifically, they used Telegram to carry out the language activities with the participants for twelve weeks. Upon completing the course, they were required to complete a questionnaire containing 24 CSs to identify their CS usages throughout the tasks. The findings showed that they employed a variety of CS in a mobile learning environment.

Finally, Fang, et al. (2018) combined three aspects of CSs, oral communication performance, communication strategies, and mobile devices, to explore the effects of

peer feedback embedded in a mobile application on, first, the use of target communication strategies taught to the participants and, second, their overall oral communication performance. Their study's findings revealed that the mobile application peer feedback system was able to enhance the participants' overall communication performance but did not improve the target CSs introduced to them. Although adopting a somewhat different focus, the studies by these researchers recommended that a lot of potential research around communication strategies and mobile devices could be undertaken by CS researchers. Indeed, my study, seeking to move the CS literature forward, has focused on using mobile devices as one of the communication strategies in face-to-face communication. It is hoped that this current study may contribute to the literature on the utilisation of mobile devices in the CSs field.

Overall, I have reviewed the three different contexts of CSs, beginning from face-to-face, continuing to CMC, and finally mobile devices. As previously stated, face-to-face seems to be a viable context for researching CS as it allows language speakers to employ various CS in communication. Similarly, the CMC context also affords speakers to deploy a variety of CSs. However, in contrast with a face-to-face environment, CMC encourages the use of digital media such as images to facilitate their communication. However, despite this uniqueness, the CMC environment, except for one type of CMC, i.e., virtual environment communication context (VEC3D), has been predominantly text-based, making it distant from real-life interaction (Shih, 2014). Despite this limitation, CMC as a CS context is still vital, considering that people are now communicating extensively online. Therefore, I anticipate that it is essential to combine both mediums to research CS, which is possible through the employment of mobile devices.

As clarified earlier, mobile devices also come with a CMC context, offer unique CSs, and possess different properties like portability and ubiquitous use, making them an effective learning tool and possibly practical to be used as a CS in communication. Thus, combining both contexts, i.e., face-to-face and mobile devices, as a CS context for my study is considered worthwhile and may contribute to the CS literature as, to my knowledge, no CS studies have adopted a hybrid CS context to date, thus making the current study a pioneer in the area of CS studies.

The next section reviews the factors affecting the use of communication strategies.

2.9 Factors Affecting the Use of Communication Strategies

The literature review shows a series of potentially affecting factors such as task type, attitude, interlocutor familiarity, personality, and culture that may influence the use or choice of communication strategies among language learning speakers (Jidong, 2011). As asserted by Jamshidnejad (2020a), Mir Mohammad Meigouni and Shirkhani (2020), and Wei (2011), one type of factor and/or a combination such might influence the choice of CS used by language speakers in communication. These factors, as highlighted by Jamshidnejad (2020a), are known as contextual variables, which surround and may change communication “from moment-to-moment” (p.7). He asserted that these contextual variables could be categorised as shown in the following taxonomy, which he called the taxonomy of context.

- Physical (environmental conditions such as place, time, the distance between communicators, seating arrangement, etc.),
- Social (different class groups, different genders, different racial or ethnic groups, different social roles, and norms, dominance, status, and power),
- Psychological (the moods and feelings each participant brings to

- communication, intimacy, willingness to make commitments),
- Cultural (the beliefs, values, attitudes, meanings, social hierarchies, religion, notions of time and the roles of a group of people),
- Historical and Relationship (the background of the previous communication between communicators, the nature of the relationship which exists between the participants, their views towards the relationship, the way the relationship had started and its purpose).

(Jamshidnejad, 2020a, pp. 8-9)

In this section, I decided to cover the relevant findings of previous research in relation to the factors involved in the present study. The factors explored in this section are attitude, culture, familiarity between speakers, and physical context, which were the most important factors that emerged across my data. First, I address attitude, followed by the other factors.

2.9.1 Attitude

Attitude, which has been a particular focus of attention among social psychologists in understanding and evaluating human behaviour, can be defined as a disposition or tendency to respond positively or negatively towards something like an idea, an object, a person, or a situation (Hosseini & Pourmandnia, 2013). In the field of language learning and communication strategy studies, researchers have believed that attitude was one of the variables that could affect learners' language learning process and communication strategies usage in communication (Ayuni Putri, 2013; Rastegar, et al., 2016).

For instance, Toomnan and Intaraprasert (2015), as well as Rastegar, et al. (2016), found that participants with positive attitudes towards speaking English utilised CSs somewhat differently than those with negative attitudes. Specifically, they employed a high number of CSs and chose self-reliant achievement strategies in

comparison to those with negative attitudes towards speaking English, and which may help them to remain in conversation. On the other hand, Malasit and Sorobol (2013), whose study was also associated with attitude as a CS factor, revealed that speaking in English and the ability to use CSs were not correlated with proficiency in English. They discovered from their study that the lower proficiency learners were able to speak the target language comfortably and used CSs competently due to their higher self-perceived English ability. This finding suggested that low proficiency learners may not end up using a large number of reduction strategies in communication if they have good self-perceived English ability.

Dong and Fang-Peng (2010), studied the relationship between proficiency levels and attitudes towards two types of CSs. Their findings suggested that both high and low proficiency level learners hold positive attitudes towards achievement strategies and have negative attitudes towards reduction strategies. However, still, the low proficiency level participants rely heavily on reduction strategies due to their lack of competence in the target language. Other researchers, Hussin and Devi (2015), also investigated the type of CS strategy, achievement, or avoidance strategy that was predominantly utilised by Malay bilingual engineering undergraduates in accomplishing a communication goal in a written discourse. Their findings revealed that the undergraduate students were inclined towards achievement strategies over reduction strategies in written communication. Thus, all the findings from the above studies suggested that attitude is an influential CS factor in communication.

The findings of these past studies are significant to my work, which has also shown attitude to be one of the emerging factors that affected my participants' use of communication strategies. By analysing these researchers' findings, I was able to learn

about attitude as a CS factor and make a connection with my own findings, as discussed in Chapter five. For now, I move to culture as another factor that affects CSs.

2.9.2 Culture

Scholars have historically defined culture in a variety of ways (e.g., Ali, et al., 2015; Hudson, 1980). However, despite its differing definitions, culture, in general, refers to “the total set of beliefs, attitudes, customs, behaviour, social habits, etc., of the members of a particular society” (Richards & Schmidt, 1999, p. 94). Based on this definition, I consider that culture can be viewed from different kinds of perspectives. Concerning language studies, culture, as highlighted by Minghe and Yuan (2013), is one of the extrinsic factors which plays a major role in second language acquisition, particularly in oral communication. They further mentioned that one should learn about the culture of the second or other languages that they intend to acquire to avoid misunderstandings, confusion, or anxiety when communicating in the target language. The concept of culture, as Wongsawang (2001) and Mayahi and Alirezaee (2015) have claimed, is normally accidentally derived from data analysis. My study showed the same pattern, with culture emerging from my data. However, there are also researchers such as Hsieh (2014) who intentionally study the effects of cultural background as a variable affecting the use of CS by learners in communication.

One CS researcher, Ghout-Khenoune (2012), identified that her participants, second-year Algerian university students majoring in English, utilised a wide range of CSs. Among these, they employed mime and gesture more frequently than circumlocution, approximation, or word coinage. Ghout-Khenoune (2012) anticipated that the use of mime and gestures among these participants might be influenced by their cultural background, which utilises “a wide range of gestures and facial expressions

either as an aid or as a substitute to their linguistic output” (p. 775). Another researcher, Wang (2013), also found that cultural background possibly influenced the type and frequency of CSs used by Taiwanese EFL learner participants. He identified that they employed a very low percentage (4.8%) of the strategy of expressing emotions regarding the target items. The low percentage of this particular strategy may be linked to the learners’ cultural background (Wang, 2013). He further mentioned that people from an Oriental culture “tend to be more conservative and implicit in relation to their feelings in contrast to Western culture” (Wang, 2013, p. 1023).

Manzano (2018) also revealed that her Nepalese participants developed two newly defined CSs, culture-based CS during storytelling. These two CSs, which she called introducing and valuing strategies, were consistently expressed during these participants’ narrations. The introducing strategy refers to making various kinds of introduction at the beginning of the story like ‘Today, I am going to... give you a story’. As for valuing strategy, this applies to telling values learned from the story to the listeners before the story ends.

Having identified the related studies that depicted culture emerging from data analysis, I now move on to a research by Hsieh (2014) who intentionally set out to investigate the effects of cultural background and language proficiency on the use of CSs among Chinese EFL learners (CFL). For his study, Hsieh (2014) recruited a total of 176 participants aged between 17 and 51 from 21 countries. These CFL learners were then divided into four cultural groups based on the geographical position of their home country. These were as follows: East Asian (67), South Asian (48), European (37), and North American (24). An Oral Communication Strategy Inventory (OCSI) was adapted from Nakatani (2006) and interviews with some of the participants were conducted to

obtain the necessary data, the findings of which indicated that the CFL learners utilised seven factors associated with coping with speaking problems. These were: social affective, interlocutor consideration, self-awareness accuracy, message avoidance or reduction, word oriented, negotiation for meaning while speaking, and grammar oriented. All the CFL participants in Hsieh's study, regardless of their cultural groups, resorted to seven factors (as mentioned earlier) associated with strategies for dealing with speaking difficulties. However, the East Asian group did not favour social-affective strategies due to their cultural orientation, which emphasises group harmony over self-expression. Thus, this study, as emphasised by Hsieh (2014), was able to provide supporting evidence for the claim that "cultural background affects strategy choice" (p.10).

These past studies gave me various insights into how culture influences participants' choices and types of communication strategy. As such, I was hopeful in being able to link them to my findings and thus contribute to the current knowledge in this domain. I will now move on to another emerging theme, familiarity between speakers.

2.9.3 Familiarity between Speakers

Familiarity between speakers in the context of the present study relates to the acquaintanceship between interlocutors - someone they are familiar with such as friends or family - and unfamiliar persons/strangers in communication (Norton, 2005; O'Sullivan, 2002). Regarding this factor, to my knowledge, it has rarely been examined as a CS variable by CS researchers. However, based on my review of the CS literature, I discovered a single study by Rosas-Maldonado (2017) that discussed interlocutor influence on CS usage. However, her study specifically considered the effect of

interlocutor type rather than interlocutor acquaintanceship, that is, the factor that emerged from my data. Interestingly, interlocutor type is itself still somewhat underexplored. As commented by Rosas-Maldonado (2017), “the relationship between learners’ use of CSs and the type of interlocutor they communicate with seems to be missing from the literature” (p. 566). Thus, from her statements, I assume that the effects of interlocutor acquaintanceship, similar to interlocutor type on CS usage, are possibly still scarce and, perhaps, this is the reason why studies about this factor are rarely found in CS literature. For this reason, therefore, in this section, I could only present interlocutor familiarity studies, which I believe to be relevant to my work.

Interlocutor familiarity, as suggested in the literature, has been reviewed by a number of researchers (e.g., Norton, 2005; O’Sullivan, 2002; Ockey, et al., 2013; Plough & Gass, 1993) in the area of language learning and interaction. For instance, O’Sullivan (2002), Norton (2005), and Ockey, et al. (2013) have investigated the effects of interlocutor familiarity in paired oral assessment. O’Sullivan (2002) conducted his study among 32 Japanese students with them assigned to friend-stranger pairs. They were then asked to take part in two pair-work activities, one with a friend and another with a stranger. It was revealed that the participants in the O’Sullivan study produced more accurate and complex language when paired with a friend in the tasks than when paired with a stranger. Norton (2005), similar to O’Sullivan (2002), found that participants who were paired with a friend performed better in interactions compared to those with a stranger. Specifically, Norton (2005) discovered that the EFL participants who were paired with a friend in the Cambridge speaking test enjoyed each other’s company, produced more talk, made jokes, and portrayed a high level of participation during interactions. Altogether, these two researchers suggested that pairing with friends has a positive influence on language learners’ speaking performance. In comparison, Ockey,

et al. (2013), however, revealed that the level of familiarity between test takers did not have any effects on the oral assessment they took. They reported that the oral assessment scores of their participants who were among Japanese EFL learners remained constant regardless of whether they were assigned to familiar or unfamiliar groups.

Plough and Gass (1993), otherwise explored the effect of this aspect on learners' interactions when paired with familiar and unfamiliar partners. In the study, twenty non-native speakers (NNS) of different cultural backgrounds and first languages who were enrolling for an intensive interview English programme were recruited. Five were matched with friends they knew for approximately four to seven months while the other five dyads were paired with people they had never previously met. They were instructed to communicate with their partners in a spot-the-difference and consensus-type task. Their interactions were audio-taped and specific interactional cues such as confirmation checks, overlaps, requests for clarification, interruptions, and sentence completions were analysed to determine whether interlocutor familiarity affects a learner's interaction. Based on their findings, familiar partners tended to overlap in their turn-taking compared to the unfamiliar groups. The familiar dyads were more willing to negotiate meaning to ensure they completely understood their friends. Not only that, the familiar dyads were found to be using confirmation checks, requests for clarification, and completed their peers' sentences more often compared to those in the unfamiliar dyads (Plough & Gass, 1993). In addition, the familiar dyads exhibited a larger number of instances of non-understanding than unfamiliar dyads. Plough and Gass (1993) explained that learners working with unfamiliar peers are less likely to express their non-understanding since "a potential breakdown in the conversation is seen as more threatening" (p. 46), whereas working with someone familiar was not as uncomfortable

or threatening to learners. To summarise, Plough and Gass (1993) suggested that interlocutor familiarity seems to influence learners' interaction.

I have presented pertinent studies concerning interlocutor familiarity and which can indeed be utilised to discuss interlocutor acquaintanceship, a factor that emerged from my data. Discussions about this factor will contribute to the CS literature. I now move to another emerging factor, namely physical context.

2.9.4 Physical Context

A physical context relates to the place and the associated physical resources available during communication. Undeniably, there are a lot of language studies that address the relationship between physical context and teaching and learning (e.g., Demir-Yildiz & Tatik, 2019; Puteh, et al., 2015). For instance, Puteh, et al. (2015) emphasised that the physical aspects of a classroom should be given appropriate attention by teachers as they may affect learners' creativity and interaction levels within this space. Similarly, Demir-Yildiz and Tatik (2019) asserted that the physical context of a classroom might influence learners' participation and success. Thus, teachers should organise the physical structures like seating arrangements, lighting, and ventilation of the classroom in such a way as to encourage learners' participation and achievement in this setting. Overall, the researchers' discourse about physical context suggested that this aspect plays a vital role in the teaching and learning process.

Physical context in my opinion, may also affect communication and the use of CS by a language speaker. This is reflected in the study by Cervantes and Rodriguez (2012) in which two groups, Group One and Group Two, from two different classrooms were observed during their English language lessons. Based on their observations, both

groups used a variety of CS during the lessons. The top three CSs they employed were language switch (25%), clarification request (17%), and comprehension check (12%). However, Group One used less CS compared to Group Two, and this was due to the classroom's inadequate physical layout in which this group did not have a proper seating arrangement; all were spread out around the classroom, which led to them only speaking to those nearby. In other words, these students did not have much opportunity to communicate with different classmates as the seating arrangements implicitly influenced them to only speak to those sitting close to them. As a result, they communicated and generated less CS than Group Two, who sat closer to each other in the classroom. This finding, in my opinion, indicates that physical context affects communication and the use of CS. Nevertheless, few CS studies, to my knowledge, have explicitly discussed the effects of physical context on CS usage. One exception is that of Cervantes and Rodriguez (2012).

Additionally, to my knowledge, neither have any CS studies reviewed the use of physical resources available in the setting to aid their communication. This has perhaps happened because the majority of CS studies have been conducted in controlled environments (i.e., laboratory settings), which are free from external variables (e.g., Malasit & Sorobol, 2013; Uztosun & Erten, 2014). The present study, however, which was conducted in natural settings, interestingly revealed that language speakers made use of the available physical resources together with CS during communication, as presented in section 4.2.1 (d).

Based on the studies presented in this section, it can be concluded that factors like attitude, culture, familiarity between speakers, and physical context may influence the choice and use of CS among language speakers in communication. Therefore, in my

opinion, it is essential to be aware and understand their influences in communication and, thus, the exploration of these factors in the present study will hopefully expand the body of CS literature in this regard.

The next section deals with the functions of communication strategies. This aspect is discussed in my literature review as my data showed that the participants in my study utilised CS for different functions.

2.10 The Functions of Communication Strategies

The function of CSs, as argued by Jamshidnejad (2011), “has been neglected or exclusively limited to compensating for L2 learners’ lexical deficiencies” (p. 3758). It is unsurprising to learn that the function of CSs being commonly associated with overcoming linguistic deficiencies as *problematicity* has been agreed by scholars to be the major criterion defining communication strategy (Bialystok, 1990; Dörnyei & Scott, 1997). Problematicity, as defined by Bialystok (1990), refers to “the idea that strategies are used only when a speaker perceives that there is a problem which may interrupt communication” (p. 3). In other words, speakers, in using communication strategies, must first have recognised that there is a communicative problem that has the potential to disrupt communication. Overall, researchers have seem to agree that problematicity is linked with one’s use of communication strategies subsequent to having realised that there is a problem that may affect the communication process (e.g., Bialystok, 1990; Faerch & Kasper, 1983; Sato, et al., 2019). Dörnyei and Scott (1997), however, argued that problem-orientedness (problematicity) on the whole is not specific enough as “it leaves undefined the exact type of the problem, an area where various approaches show considerable divergence” (p. 182). ‘Problem’ commonly refers to deficits in resources or gaps in speakers’ knowledge, hindering the verbalisation of their intended messages

(Dörnyei & Scott, 1997). These scholars, therefore, further expanded this term by introducing three different types of problems that speakers may encounter in second language communication: own-performance problems, other-performance problems, and processing time pressure (Dörnyei & Scott, 1997).

The first type of problem concerns the speaker's realisation that what they have said is incorrect (or only partly correct). Examples of mechanisms associated with this problem are self-repair, self-rephrasing, and self-editing (Dörnyei & Scott, 1997). The second type of problem is the other-performance problem, which relates to the speaker's perception of problems with their interlocutor's speech, "either because it is thought to be incorrect (or highly unexpected), or because of a lack (or uncertainty) of understanding something fully" (Dörnyei & Scott, 1997, p. 183). As for the last type of problem, which is processing time pressure, this refers to the second language (L2) speaker's time requirements in processing and planning L2 speech. Strategies linked to this problem are the use of fillers, hesitation devices, and self-repetitions (Dörnyei & Scott, 1997). These three types of communication problem, as put forward by Dörnyei and Scott (1997), are considered to be comprehensive since they address the exact type of problem in defining communication strategies. The explanations of the criterion for CS suggested that this tool is used only after one has noticed that there is a problem that may otherwise hinder the communication process. Specifically, not only can the tool be used to overcome one linguistic deficiency in the target language but to also counter other types of problems related to communication (Sato, et al., 2019), as detailed above.

In addition to this function of CS, other scholars such as Brown and Yule (1983) and Jamshidnejad (2011) have also discussed two functions for oral discourse that relate to the function of communication strategies. These are transactional (intrapersonal) and

interpersonal functions. Transactional refers to transmitting the information or meanings to the interlocutor (Jamshidnejad, 2020b), while interpersonal relates to using oral discourse to establish and maintain social relationships (Brown & Yule, 1983; Jamshidnejad, 2020b; Lin, 2020). The proposed functions for oral discourse illustrated above, as argued by Jamshidnejad (2011), are linked with the conceptualisation of communication strategies, namely the psycholinguistic and interactional approaches. CS, from the psycholinguistic point of view, is described as an “individual conscious plan”, “produced in problematic situations, utilised by second language speakers to help ‘them’ achieve the ‘communicative goal’ while facing a problem in communication” (Faerch & Kasper, 1983, p. 36). In this approach, CS is viewed as an individual-centred strategy, the purpose of which is to deliver meaning and attain a communicative goal by overcoming linguistic difficulties.

On the other hand, CS from an interactional perspective is viewed “as tools used in a joint negotiation of meaning where both interlocutors are attempting to agree as to a communicative goal” (Tarone, 1980, p. 420). Here, CS from an interactional perspective focuses on ‘both parts of interactions’ and its major function is to aid both interlocutors to agree and convey meaning in an interactional situation. In general, the psycholinguistic and interactional approaches offer two different functions for CS. The former perspective has to do with using CS to express meanings by utilising a strategic use of language *individually*. The latter approach takes agreement on meaning *between interlocutors* as its main function of CS in communication (Jamshidnejad, 2011). In the present study, my stance towards communication strategy function is not restricted to either the intrapersonal or interpersonal, but rather I consider it a combination of both. This is in agreement with Uztosun and Erten (2014), who contended that the two approaches can be blended together because “during communication, both interlocutor

and speaker experience cognitive processes and these are mainly modified through interaction” (p.57).

A number of CS researchers have, more recently, investigated the possible CS functions in communication to challenge the aforementioned functions, which Jamshidnejad (2011) regarded as traditional (e.g., Jamshidnejad, 2011; Krishnan, et al., 2018; Ohta, 2005; Rababah, 2003). Based on these researchers’ findings, the functions of CS may vary depending on how an individual uses each CS in interactions. As such, Ohta (2005), in her research, revealed that the comprehension check as a CS was utilised by her participants and appeared to have multiple functions in discourse: (1) confirming comprehension, (2) repairing initiation, (3) marking the unexpected or humorous, and (4) acting as a continuer (p. 384).

Jamshidnejad (2011) put forward the idea that there were three major functions of CS in communication, namely promoting meaning transfer in communication, promoting the accuracy of language in communication, and keeping the interaction going. The examples of CS connected to these main CS functions have also been highlighted by Jamshidnejad. For instance, in promoting meaning transfer in communication, the participants of his study who were among the English as Foreign Language (EFL) learners were identified using communication strategies such as clarification request, repetition, interpretive summary, and appeals for help in communication (Jamshidnejad, 2011). Meanwhile, in their attempt to promote the accuracy of language in interaction, Jamshidnejad’s EFL participants tended to use repairing strategy (self- and other repair), own accuracy check, retrieval and requesting help strategies as well as strategy markers and avoidance strategies (Jamshidnejad, 2011). Lastly, these participants utilised various communication strategies such as

asking for clarification, and let-it-pass, as well as fillers as a means to keep the interaction going (Jamshidnejad, 2011).

Krishnan, et al. (2018), similar to Jamshidnejad (2011), also explored the functions of communication strategies in communication. They conducted a pilot study involving five Chinese EFL learners. They used pair discussion and stimulated recalled interviews to elicit CSs. Their findings indicated that the Chinese EFL learners employed various CSs. They also identified that these participants used CSs for three main reasons: to convey meanings, to ensure language accuracy, and to keep conversation going, and which seemed to be consistent with the findings of Jamshidnejad (2011), as presented earlier. Specifically, the Chinese EFL learners, similar to the participants of Jamshinejad's study, utilised confirmation request, interpretive summary, asking for help, and clarification request to convey meanings. Again, in parallel with Jamshidnejad's (2011) participants, Krishnan, et al. (2018) stated that their participants utilised the repairing strategy to ensure language accuracy and, lastly, the Chinese EFL participants used fillers similar to Jamshidnejad's (2011) participants to keep conversation going. However, in a slight divergence from Jamshidnejad's (2011) study, the Chinese EFL learners in Krishnan, et al.'s (2018) study employed expressing confusion as a strategy to keep conversation going.

Other researchers, e.g., Manchón (2000), as well as Popescu and Cohen-Vida (2014), also highlighted the functions of CS in communication. Manchón (2000) recommended that CS be taught to the language learners as this strategy may perhaps develop a sense of learner autonomy. This was supported by Popescu and Cohen-Vida (2014), who stated that language speakers would be able to become autonomous communicators via the application of communication strategies in interaction.

Based on the above discussions, each communication strategy seems to have multiple functions in communication, a point which is clearly worth further exploration. However, unfortunately, this research area “has not attracted much attention from CS researchers” (Jamshidnejad, 2011, p. 3758). A lack of interest in the function of CS in communication indicates the need to explore this area to address the associated gap in the literature.

2.11 Chapter Summary

I commenced this chapter by presenting the definition of communication and its elements, followed by the two types of communication: intrapersonal and interpersonal. Since my study relates to communication, I think it is necessary to address this notion. By doing so, I can provide a better overview of what communication is, the elements that encompass it as a concept, and the types, as mentioned above, of communication experienced by my study participants in daily life. Under the same heading, I also highlight the English language as a means of communication, as I explored communication strategies among my participants while communicating in English.

The next section provided the notion of communicative competence. I first described where this concept originated from (i.e., Chomsky, 1965), followed by strategic competence, which happens to be my study’s primary interest. The reason for opting for strategic competence by Canale (1983) is also detailed. Then, I considered the origins and conceptualisations of communication strategies. I believe that it was necessary to highlight the origin of CS to obtain some knowledge about how this area of research commenced. Meanwhile, with regard to the conceptualisation of communication strategies, I further believe that it was essential to address this theme to obtain an understanding about three different theoretical approaches, namely the

‘interactional’, the ‘psycholinguistic’ and the ‘integrated approach’. Of these, the integrated approach was adopted to conceptualise the CS of my study, as it combines both the psycholinguistic and interactional perspectives, which are linked to both types of communication (i.e., intrapersonal and interpersonal) that were experienced by the participants of my study. Different types of taxonomies which are the result of the three different CS conceptualisations mentioned above were also highlighted in this study. One of the taxonomies, Dörnyei and Scott (1997) Inventory of Strategic Language Devices, was utilised as a guideline to code the communication strategies that emerged in my study. This particular CS taxonomy was chosen as it combines both perspectives – the psycholinguistic and interactional - and also comes with two types of CS strategies – *achievement* and *reduction* - which make it the most comprehensive taxonomy that is currently generally available. However, despite its comprehensiveness, this taxonomy could not, unfortunately, cater to the new emerging CS in the current work. Therefore, an adapted taxonomy was specifically created for the present study. See section 5.1 for further discussion about the adapted taxonomy. Following this section, I discussed Pragmatics and explained its connection with strategic competence.

In this chapter, I included past studies into CS, as they should be of help when I proceed to discuss my findings later. I also explicated the context of communication strategies which refers to the medium where communication strategies studies were usually carried out by researchers. Critically, there is a methodological gap regarding the way in which researchers explore CS. Commonly, they study CS face-to-face and in the CMC context, but I see a need to look at the synergy of mobile devices and CS in a face-to-face context, which the present study has addressed. I reviewed the literature about mobile devices and discussed their characteristics and limitations via the relevant studies that address the utilisation of mobile devices among language learners. I also

again highlighted the need to study mobile devices as one CS in this section, with the awareness that mobile devices can be used as an effective CS in communication.

Additionally, I discussed the functions and factors of communication strategies. These issues are important to highlight in my study as my findings are linked to them. For this reason, I therefore believe that it is essential to understand the literature connected to these two aspects.

In conclusion, I have presented the foundational literature for my study. The following chapter is the methodology chapter, which discusses my research paradigm, research methods, data analysis, and research ethics and guidelines.

CHAPTER 3

METHODOLOGY

This chapter presents the methodology and methods employed in the current study. The justifications behind the chosen methodology and methods utilised to collect data are also detailed here, as is the nature of the participants chosen for the study together with the steps taken to recruit them. In addition, the approach (quasi-natural CS elicitation research approach) specifically developed to research communication strategies (CSs) in the present study is described in detail. The remaining sections justify the rationale for the qualitative data analysis approach selected, describe each phase taken in analysing the qualitative data, and explain the ethical guidelines followed prior to conducting the research.

3.1 Research Paradigm

Guba and Lincoln (1994) explain that paradigm refers to a “basic system or worldview that guides the investigator not only in the choices of method but in ontological and epistemological fundamental ways” (p. 105). Based on my understanding of the definition of paradigm mentioned here, this term can be viewed as a framework which consists of philosophical aspects used as a template by researchers to investigate phenomena of interest. In selecting the suitable research paradigm of a study, Phakiti (2014) advised researchers to identify “what works best and is appropriate to address their research purposes and questions within a topic domain, and the context of their research, including participants and social settings” (p. 44). Thus, following these guidelines suggested by Phakiti (2014), I therefore adopted the constructivism as a philosophical stance to guide how my research was to be conducted. Constructivism, according to Guba and Lincoln (1989), is also known as a naturalistic or interpretive

paradigm. However, as stated in the literature, most scholars have used these three terms interchangeably (e.g., Blandford, et al., 2016; Hoare, 2011). Thus, in this section, I will use the term constructivism interchangeably with the other two terms mentioned above. Also, in this part, I will describe constructivism by comparing it with another influential paradigm, positivism. The discussions between interpretivism and positivism will involve the three components that characterise a paradigm - first, ontological assumption (what constitutes reality?), second, epistemological question (what is our relationship to reality?), and, finally, methodology (what are the strategies for understanding reality?) (Guba & Lincoln, 1989; Phakiti, 2014).

The constructivist paradigm aligns with the relativist ontological position. Relativism emphasises that reality is subjective and uniquely individual (Denicolo, et al., 2016). This means that relativism acknowledges that there are multiple realities which are socially constructed in the minds of different persons (e.g., Tang & Joiner, 2006). A reality, according to constructivists, consists of perceptions and meanings. They are relative, multiple, intangible, and ungoverned by natural laws. In making sense of the multiple realities constructed by the individuals, constructivists must recognise all the realities and “culminate the most informed and sophisticated construction on which there is consensus among individuals” (Guba & Lincoln, 1989, p. 86). In comparison with the constructivist paradigm, positivism, which takes realism as its ontological position, does not acknowledge the presence of multiple realities in people’s minds. Rather, positivism believes that realities really exist out there in the world and are directed by immutable laws and mechanisms (Takhar-Lail, 2015). Realities, as claimed by positivists, are composed of facts or sense data that can be seen, heard, touched, and smelt (Gray, 2014). Furthermore, positivists view reality as hard, objective, and tangible and in a state waiting to be discovered by the researcher.

Epistemologically, a constructivist approach takes the subjectivist stance that acknowledges that reality is inevitably subjective and dependent upon human values (Phakiti, 2014). In such a sense, the researcher and participants' background values (e.g., experience, morals, and feelings) do influence the construction of realities (Willis, 2009). In line with Willis (2009), Kanti Srikantaiah, et al. (2010) also asserted that our understanding of a phenomenon or event is constructed "through our experiences, and the character of our experience is influenced profoundly by our cognitive lens" (p. 136). Contrary to this, the positivist paradigm takes the objectivist stance that believes reality is value-free. This means the researchers and the objects of their study remain separate, and mutually independent. In other words, positivists do not incorporate their background values (e.g., feelings, personal experiences) throughout the process of observing and measuring the reality (Hennink, et al., 2011).

Methodologically, the positivists would begin their research with a theory or hypothesis, and then seek explanation for the phenomenon studied through rigorous scientific observation or empirical inquiry (Daymon & Holloway, 2010). They also determine the variables of their study, gather numeric data, and make interpretations of it through statistical analysis (Berryman, 2019). For them, these methods are seen as the best way to uncover the reality which they perceive to contain only one single truth (Romm, 1991). In comparison to positivists, those from the interpretivists' camp focus on generating meanings and understanding of a studied phenomenon via interactions with the participants of their study. In such a sense, the researchers would then be able to capture the participants' real reactions or behaviours with regard to the phenomenon under investigation (e.g., McMurray & Hinton, 2017). They gather data in the form of words and phrases, textual analysis is often employed, and the data are presented in a form of themes or patterns (Creswell & Creswell, 2017).

Based on the explanations written above, I concluded that it is appropriate for me to adopt the constructivism paradigm for the present study because first, I would be able to capture the participants' multiple perspectives with regard to the phenomenon under investigation. Second, this paradigm that emphasises subjectivity allows me to interpret the studied phenomenon based on my own personal background. For me, I personally believe that my own individual values (e.g., feelings and experiences) play a significant role in the creation of the data and it is impossible not to incorporate them to some extent as they are naturally part of me. And, as argued by Greenbank (2003), researchers would naturally bring their values into uncovering the 'truth' and, therefore, one can never adopt a value-neutral approach in conducting a research study. Finally, I believe that capturing data following the constructivist approach would help me to generate an in-depth understanding of the studied phenomenon. Judging according to these reasons, I therefore, once again, emphasise that the constructivism paradigm is suitable for my present work.

3.2 Participant Recruitment

There are many recruitment strategies for qualitative studies, namely by using gatekeepers, via face-to-face, emails, informal networks, and advertisements (Lochmiller & Lester, 2017; Whitley & Mary, 2013). However, despite the variety of recruitment strategies available in the literature, Hennink, et al. (2011) argued that there is no perfect recruitment method and, therefore, it is worthwhile to employ several recruitment techniques in any given project. This is because each recruitment strategy has its own advantages and disadvantages and, thus, using various methods to approach participants in a single study might be beneficial as the limitations of one recruitment method could be complemented by another (Hennink, et al., 2011). In this regard, four

recruitment strategies, namely through gatekeepers, emails, informal networks, and face-to-face methods have been employed to recruit participants for the present work. A description of each recruitment method is given below.

3.2.1 Gatekeepers

Gatekeepers refer to a person or organisation that can give access to the study community. Apart from that, they can also provide a researcher with information related to the participants and provide assistance with recruiting those participants (Roller & Lavrakas, 2015). With regard to this, I contacted several gatekeepers via email prior to conducting my research project. The first permission was obtained from the Senior Assistant Registrar of University Utara Malaysia. She later referred me to the Postgraduate Officer who was in charge of postgraduate students. The Postgraduate Officer then helped me by providing a complete list of postgraduate students' email addresses that could be used to initiate contact. He also suggested that I contact the Director of the Language Centre if I intended to recruit postgraduate students from English language classes. In all, I believe it is important for a researcher to consult gatekeepers before undertaking a research so that the right information and appropriate assistance can be obtained.

3.2.2 Emails

The use of email is another method that can be used to recruit participants for a research study (Reis & Judd, 2014). In the present work, I used email to inform the students about my research and at the same time invited them to become the participants in my study. I decided to use email, for conventional wisdom suggests this recruitment strategy may elicit high response rates because the participants can simply click the

email sent to them and read about the invitation to my study. At the same time, this recruitment technique may undeniably help me to save costs as I did not have to travel to the setting to search for respondents. However, using email to recruit participants comes with its own limitations. In my case, I was puzzled when it took more than three weeks to receive responses from the participants and, worryingly, only a few respondents replied to my email. The issue of low response in email-based recruitment is apparently not alien to researchers, and this has been acknowledged in articles by Murphy, et al. (2020) and Poynton, et al. (2019), that potential participants showed a low response to emails. Possible reasons for a poor response rate can be the participants' choice to disregard the email, some may not read them all fully, while the rest may simply choose to delete the email without even checking the content (Grove, et al., 2013; Siu, et al., 2006). Low response rate is also caused by the invitation emails being automatically moved to the junk email folder (Sappleton & Lourenco, 2016). Indeed, this is what occurred with my study, with some potential research participants claiming that they only knew of my research advertisement once they checked their spam. Apart from that, other participants mentioned that they rarely checked their email. This is because they usually communicate with their lecturers and friends through the WhatsApp application.

Overall, I managed to recruit quite a number of participants using email despite the difficulties mentioned above. In fact, I slowly received more responses from the postgraduate students at the time I commenced my data collection. Those potential participants who were willing to participate were sent a link of the demographic background questionnaire to be answered, with their permission being initially obtained through email before they were given the specific link to the questionnaire. Further explanation of the demographic questionnaire will be provided in the next section.

3.2.3 Informal network and advertisement

The informal network recruitment method was also used to recruit potential participants. This is a useful data gathering technique as researchers can gain access to large numbers of participants at no cost (Hwang & Chen, 2017). Social networking websites such as Twitter and Facebook are examples of the informal networks that can be utilised to search for potential participants. In the present study, I posted my research advertisement on a Facebook page called PhD UUM and the Doctorate Support Group to approach potential participants. Similar to those participants recruited via email, participants identified through Facebook were also asked for their consent before I sent them the link to the demographic background questionnaire. Apart from using the informal network to advertise my participant recruitment, I also used paper advertisements as a recruitment strategy (Hennink, et al., 2011). To reach potential participants, I distributed my flyers outside the university library. To be honest, I felt really disappointed when only a few students took the flyers. Many of them kept saying 'No' when I tried to hand out the leaflets and others avoided me by pretending to walk quickly whenever I tried to approach them. This perhaps happened because they thought that the papers that I had with me were a set of questionnaires, which I would ask them to answer on the spot, and which they perhaps felt they had no time for.

3.2.4 Face-to-face

The face-to-face recruitment technique was also used in my research. This form of recruitment, which is common in both quantitative and qualitative research, requires a researcher to visit the setting for participant recruitment (Lochmiller & Lester, 2017). Before I went to the research setting, I contacted another gatekeeper, the Director of University X's Language Centre via email informing them about my research project

and intention to recruit participants. After permission had been obtained from her, I contacted the English language teachers asking for a 10-minute slot for the participants' recruitment session. I then went to four English language classes to verbally advertise my research to potential participants. There, I also distributed the information sheets from my study for the potential participants to read and retain. Those interested in participating were asked to complete the demographic background questionnaire in the classrooms, with the participants' verbal consent being gained prior to answering the questionnaire.

As mentioned earlier, the potential participants recruited through email and by face-to-face methods were given the demographic background questionnaire to answer.

3.3 Demographic Background Questionnaire

A three-page demographic questionnaire was designed for the prospective participants. This questionnaire consists of four sections: personal information, language background, mobile device information, and Internet usage (see Appendix B). It was also prepared in two different forms. The first form was a paper-based questionnaire which was distributed during face-to-face recruitment. The second was created online using Google Forms. The potential participants recruited via emails were given the link for the survey for them to answer the questions. Once completed, they just had to click the 'Send' button, and I would automatically receive their responses. I found that using an online survey was beneficial because I could save money as no printing/hard copies was needed. As suggested by Wright (2005), "online survey researchers can also save money by moving to an electronic medium from a paper format" (p. 1). The use of online survey did not only eliminate printing costs but also helped me to save money on postage and travel expenditure, which are commonly

associated with traditional pen-and-paper surveys. Apart from that, using the online survey was time-saving as this method allowed me to collect data and undertake other tasks at the same time. This is in line with Llieva, et al. (2002) who noted that the researchers are able to conduct the preliminary analysis on collected data while waiting for further responses from other participants, which can be easily received via email or any database file.

Once I received the participants' completed questionnaires, I ran through their responses. Those respondents who attempted all the questions, answered with elaborations, and met the specific criteria; were aged 22-35 years old; were proficient in the English language; and had mobile devices were recruited as the participants of the study. Such a selection of participants based on criteria determined by a researcher is known as purposive sampling (Stacks, 2017). Further explanation of purposive sampling is provided in the next section.

3.4 Purposive Sampling

As mentioned previously, I selected my participants based on specified criteria as determined by myself (see 3.3). Selecting participants based on specific requisites determined by the researcher is known as purposive sampling (Stacks, 2017). By applying purposive sampling, Patton (1990) and Denscombe (2014) asserted that rich information and valuable insights about the research topic can be gained, as the selected individuals are those with the appropriate knowledge about or experience of the studied phenomenon. However, apart from knowledge and experience, Palinkas, et al. (2015) emphasised that researchers need to ensure the chosen individuals are able and willing to participate and have the ability to express their experiences and opinions. This is to ensure that the relevant data pertaining to the phenomenon of interest could actually be

attained. Based on the descriptions above, I considered purposive sampling to be suitable for use in the present study. Via this technique, I managed to recruit the participants that were needed. Further explanation about the participants of this study is detailed in the next section. In that section I also describe some information about the context of the study, which seems to be a relevant element of the constructivism paradigm.

3.4.1 The Context and Participants of the Study

University Utara Malaysia (UUM) is the sixth public university in Malaysia and is located in the north of the country. It is the only university that has specialised exclusively in management education since its establishment in 1984. The university has three main colleges: UUM College of Business, UUM College of Arts and Sciences and UUM College of Law, Government and International Studies. The medium of instruction at this university is English and it has become the university of choice for international students, especially those from Indonesia, China, Somalia, Thailand, Yemen, Nigeria, Algeria, Uzbekistan, and Zimbabwe, and amongst others (Universiti Utara Malaysia, 2020).

As courses are taught in English, Malaysian and international students must pass a specific English test before they can begin their studies there. Malaysians must sit for Malaysian University English Test (MUET), while the international students need to pass either the TOEFL or IELTS or equivalent English test to prove their English proficiency. In addition, the international students must also learn the Malay language (Bahasa Malaysia) and will be tested at the end of the course. Overall, it is anticipated that those who study at UUM have an adequate level of English proficiency.

For the study, I recruited 30 ESL/EFL participants. Of these, 15 were Malaysian ESL (MS) speakers on various undergraduate and postgraduate programmes from a university in the northern part of Malaysia. They were aged 22-35 years old and had Bahasa Malaysia as their national language. Seven of them were undergraduate students in their final years while the remainder were postgraduate students. The other 15 were speakers of the English language who were of different nationalities (ESN) undertaking postgraduate programmes. 15 of them were classified as either ESL or EFL learners based on Kachru's three concentric circles model (1985) (Kachru, 1985). The ages of the ESN participants also ranged from 22-35 years old. The reason for recruiting this particular age group for both MS and ESN is because they are expected to have learnt English for more than five years and thus could be considered proficient in using the English language. It was important for me to recruit participants who were proficient in the use of the English language because my study required the participants to express their thoughts and feelings of CSs. In addition, more proficient speakers are expected to be able to respond to the elicitation tasks involved in the activity.

Apart from that, final-year undergraduates and postgraduate students who can be considered as young adults (Montgomery & Arnett, 2015) were expected to have their own mobile device as they might be using it in the tasks that would be conducted. In addition, young adults are assumed to spend more time with their phones and use them for different purposes compared to older adults, making them suitable for the present study, which focused on mobile device use as one of the CS.

Besides, as noted earlier, the number of postgraduate students involved in my research outweighed the number of undergraduates. This was because postgraduate students were more flexible in terms of timetable, as they had fewer or no classes on

weekdays and therefore would be able to voluntarily participate in my study. These 30 participants were paired for the elicitation tasks and interview sessions, as explained in the next section. Table 3.1 below displays the list of participants in my study.

Table 3.1 The list of participants in my study

Pair	Nickname	Gender	Nationality
1	Alip Vana	Male Female	Malaysian Indonesian
2	Khaty Bennie	Female Male	Malaysian Algerian
3	Meera Jumee	Female Male	Malaysian Tanzanian
4	Fareel Ayesha	Male Female	Malaysian Nigerian
5	Aizat Muslee	Male Male	Malaysian Nigerian
6	Syutera Ozmen	Female Male	Malaysian Nigerian
7	Daya Hasena	Female Female	Malaysian Philippine
8	Annie Irsyadi	Female Male	Malaysian Indonesian
9	Eyin Hamidi	Female Male	Malaysian Nigerian
10	Sahana Rasaqi	Female Male	Malaysian Nigerian
11	Sabby Pilee	Female Female	Malaysian Tanzanian
12	Noor Rashidi	Male Male	Malaysian Nigerian
13	Mimie Aseer	Female Male	Malaysian Somali
14	Fiza Tendy	Female Female	Malaysian Zimbabwean
15	Aylan Hafiy	Male Male	Malaysian Nigerian

3.5 Data Collection Methods

This section presents the methods that I used for data collection. Specifically, the rationale behind the chosen methods, encompassing their advantages and limitations, is described accordingly.

3.5.1 Elicitation Tasks

Although there are different types of elicitation methods in CS studies, similar tasks (e.g., picture description task, picture reconstruction task, discussion) are found to be repeatedly used by CS researchers to elicit communication strategies among the participants. The first CS elicitation task, ‘picture description task’ was developed by Varadi in 1973. In his study, 19 Hungarian learners of English were given a picture story and asked to provide written descriptions of it in both English and Hungarian. The results of the study showed that various CSs were employed by the participants during the task. The elicitation method which included Varadi’s (1973) picture description task was later adapted into different versions by CS researchers (Poulisse, 1996). Examples of the tasks are picture reconstruction (e.g., Bialystok & Fröhlich, 1980), picture description (e.g., Littlemore, 2003; Poulisse & Schils, 1989), picture sequence (e.g., Smith, 2003), narration (e.g., Dechert, 1983; Poulisse & Schils, 1989), and discussion (e.g., Haastrup & Phillipson, 1983; Ting & Phan, 2008).

The elicitation tasks mentioned above are different in features and ways of conduct, but all are classified as ‘artificial tasks’. Artificial tasks refer to a workplan or language activity that focuses on meaning and resembles real-life communication (Ellis, 2003). For instance, the picture sequence activity is an artificial task, but the process involved during the task, i.e., answering questions and negotiation of meaning, reflects those that happen in real-life communication. Therefore, the employment of artificial tasks as the elicitation method in this present study is considered suitable as they can elicit CSs, and also allow the interlocutors to communicate using real-life communication.

In the present study, three elicitation tasks were chosen after the piloting. These elicitation tasks were as follows.

1. Object identification/description task: the participants were required to name the object in the photographs.
2. Picture sequence task: the participants were asked to arrange and name each stage of the life cycle of a frog.
3. Role-play task: the participants were asked to interact based on the roles and situations given.

Even though the tasks chosen above are, one could argue, artificial and unnatural, the participants would still need to “employ the same kinds of communicative process as those involved in real world activities” (Ellis, 2003, p. 3). Therefore, it could be assumed that, for this particular study, the selected tasks only act as a ‘tool’ to stimulate participants to produce language used similar to that in real-life communication. The tasks mentioned above also focus on meaning, and this is similar to the purpose of real-life communication and, additionally, makes them notably different from the elicitation tasks developed in previous CS studies, which seemed remote from real-life communication as they were purposely invented to only elicit as many CSs as possible and not the meaning (e.g., Paribakht, 1984; Si-Qing, 1990). In addition, the determined tasks also have all the characteristics of communication which seem appropriate to be employed in the study, namely:

- 1) there must be a communicative purpose (i.e., not just a linguistic goal)
- 2) there must be a focus on message rather than on the linguistic code
- 3) there must be some kind of ‘gap’ (e.g., an information or opinion gap)
- 4) there must be opportunity for negotiation when performing the task
- 5) the participants must choose the resources – verbal and non-verbal – required for performing the task (i.e., they are not supplied with the means for performing the task).

(Nobuyoshi & Ellis, 1993, p. 204)

These tasks might also be different in terms of their structural makeup; however, they are similar in a way, in that the participants would need to communicate

cooperatively to solve each task. In addition, the goal of this study is not to investigate whether different types of tasks affect the use of communication strategies, but rather to explore how the participants interact and deliver messages to each other. Therefore, it is considered that the tasks chosen were appropriate to be employed in my research.

3.5.1(a) The Elicitation Task Sessions

In the present study, 30 participants were paired up to engage in the three elicitation tasks described above. Specifically, each dyad consisted of one Malaysian ESL speaker (MS) and a speaker of the English language who was of a different nationality (ESN). The pairs were formed based on the matching availabilities of their schedules. In the elicitation tasks sessions, the two participants sat facing each other to work on the tasks prepared for them. I also sat close to them so that I could observe their interactions. The duration of the elicitation tasks sessions varied from 30 minutes to over one hour. These sessions were recorded using video cameras which I had set up. Digital voice recorders were also provided for the participants to record their verbal responses.

3.5.1(b) Conducting Elicitation Tasks in Natural Settings

The elicitation tasks sessions were carried out within natural settings, namely a cafe, university, hotel lobby area, and the courtyards and garden near to student accommodations. The participants were assigned to interact in the provided tasks and were observed by myself. Since the cafe and hotel used for data collection are under the University Utara's Malaysia (UUM) management, I therefore only needed to bring the permission letter gained from the gatekeeper each time I conducted my study there. However, the permission letter was not required in open spaces such as the courtyards

and garden as those places were mainly designed for the students to conduct activities and are also open to the public.

A few steps were taken before I conducted the elicitation tasks in the settings mentioned above. The first step was to check the distance of the settings. In the original proposal, I planned to conduct the elicitation tasks in natural settings at the city centre. However, I changed the plan as I discovered that it took 25 minutes by bus or car and two hours of walking to reach the city centre from University Utara Malaysia (UUM). Therefore, considering the time and distance to reach there, I decided to employ my study close to student accommodation compounds and near the university area, e.g., the university hotel. I believe that it is important to choose settings which are feasible for both participants and researcher to ensure the study could be conducted smoothly.

The next step was to identify suitable spaces at the natural settings for the elicitation tasks to be conducted. For example, for the lobby area setting, I chose the table which was a bit distant from the receptionists' desk to ensure the participants' voices during the elicitation tasks did not interrupt the receptionist-customer communication. Once the right spaces were determined for each setting, the observations were conducted to observe the participants engaging in the elicitation tasks. Further explanation of the observations is presented in the next section.

3.5.2 Observation

Observation is one of the extensively used techniques in qualitative research (Creswell, 2014). By using observation, a researcher would be able to directly experience the phenomenon being investigated. Observations also allow the researcher to observe and capture the *actual behaviour* (what people actually say or do) rather than

reported behaviour (what they say they do) (Hammond & Wellington, 2013). This method can also generate an in-depth understanding of the studied phenomenon (Cohen & Crabtree, 2006). Despite its advantages, observation also has its limitations in that people might modify their behaviour when they know they are being observed. However, the benefits of using observations outweigh this drawback, and therefore I decided to employ observation in my study.

There are different roles that can be adopted by a researcher when observing participants of a study. Roles, as defined by Baker (2006), refer to “the characteristic posture(s) researchers assume in their relationship with the people whom they are studying (hereafter) referred to as ‘insiders’” (p. 173). In this present study, I have adopted the stance of observer-as-participant, which emphasises more on observation than participation (Baker, 2006). This role, according to Baker (2006), “advances very slightly in his/her involvement with the insiders” (p. 175). This means it is permissible for the researcher to have interactions with the insiders while still being involved in the observation. However, the researcher should bear in mind that their involvement with the insiders should remain “strongly research oriented” and “not cross into the friendship domain” (Adler & Adler, 1994, p. 380).

In relation to my research, I introduced myself as a PhD candidate to the insiders and made them aware that they would be observed while interacting in the elicitation tasks. As an observer-as-participant, my main role was to observe the insiders. However, I only had minimal involvement as part of the observation through only repeating the instruction of the tasks when they seemed unsure of what needed to be done with the tasks provided. Thus, in this study, I observed 15 pairs of participants interacting in the elicitation tasks. During the observation, I sat close to the pairs to view

what and how communication strategies were used when the participants interacted using the English language in the elicitation tasks provided. I also marked the CSs they used using Dörnyei and Scott's (1997) Inventory of Strategic Language Devices as guidelines. I also wrote down memos regarding their CS usage, including their employment of mobile devices during the elicitation tasks.

I noticed that the participants seemed nervous at the beginning of the tasks. However, once they began carrying out the activity, they seemed to enjoy it and engage with each other really well, a fact which was noticeable in the video recordings of their interactions. Regarding the video cameras, I used two cameras set up on tripods to record the participants performing the elicitation tasks. Following the strategy suggested by Fischer (2006), the second video camera was used as a back-up in case of any technical hitches. Both of the video cameras used for recording picked up the sound quite well. However, since my observations were undertaken in natural settings, I also used two digital voice recorders with external microphones for better sound quality. There were also times where I needed to ask the participants to change their seating angles for better light. This was done to obtain quality videos for data analysis purposes.

The utilisation of video recordings during observations was suitable for the present study as it helped me to capture the non-verbal CS (i.e., gestures) produced in interactions which were difficult to observe in real time (Bottorff, 2004). In addition, the use of video recordings was more reliable compared to real-time observation and note-taking as I was able to revisit and examine the data repeatedly by playing back the recorded videos (Bloor & Wood, 2006). Replaying the recorded video would give me more time to generate in-depth thoughts on the collected data before drawing conclusions (DuFon, 2002). Therefore, a video camera is believed to be useful for

interaction-based research such as communication strategies. However, despite its advantages, a video camera could not record the participants' feelings and thoughts on the phenomenon under investigation (Bloor & Wood, 2006). Similar to the video camera, observation is also unable to capture the participants' unspoken opinions and perceptions. Therefore, to compensate the aforementioned limitations, interviews were conducted to attend to the issues which could not be covered by observation and video recording.

Conducting observations within natural settings was not a challenge-free procedure. I recall having to postpone my observations due to the worsening haze conditions.⁵ The university was shut down for three days, and no academic or co-curricular activities were allowed within that time. The students were also advised to stay indoors and avoid spending their time outdoors for health and safety reasons. Apart from that, the unpredictable weather sometimes affected my observation process. I recall having to stop my observation when it suddenly began to rain. My participants and I had to run to the nearest building to avoid getting soaked in the rain and of course to save my equipment! I also received complaints from the participants when the weather unexpectedly became too hot during the observations. The participants were sweating and complaining that they could not focus on the tasks. Therefore, an immediate action was taken by relocating the participants to the nearest rooftop courtyard to continue the activity.

⁵ The haze which happened in Malaysia was due to forest fires practiced by our neighbour, Indonesia. It is known as slash and burn agriculture, where land is intentionally set on fire to clear the area for new planting. This method is commonly practiced by them as it is cheaper and simpler compared to other methods. Forest fires have become a seasonal phenomenon in Indonesia which cause deaths among humans and animals (e.g., the orangutan) (Balch, 2015).

3.5.3 Interview

The interview is possibly the most widely used method in qualitative research (Bryman, 2012). Interview data is derived from the participants' answers to research questions. Their thoughts and opinions of the studied topic are also considered to be data. This contrasts with the observation method where the data comes from looking at what people do (Denscombe, 2014; Wellington & Szczerbinski, 2007). There are different types of interviews, namely individual and focus group. These two types of interview are used by researchers to gather information that cannot be answered using observations (Burns, 1999; Cohen, et al., 2011). In my original proposal, I planned to conduct both individual and focus group interviews. However, due to certain constraints, I adopted the dyadic interview as an alternative to the two types of interviews mentioned above. Dyadic interview, as described by Bell and Campbell (2014), refers to interviewing two participants at once. This method has appeared in studies since the 1970s, but very little of the literature has discussed dyadic interview compared to individual and focus group interviews (Bell & Campbell, 2014; Morgan, et al., 2013). Therefore, I will briefly describe dyadic interview and the reasons for adopting it for this study.

The dyadic interview was ideal for the present study because it included the benefits of both individual and focus group interviews. As with the individual interview, the dyadic interview can potentially collect more data from each research participant. For instance, in a 60-minute dyadic interview, each participant would have the same amount of talking time, which is 30 minutes per person, in comparison to a focus group of six which may end up only having 10 minutes to speak with each person (Morgan, et al., 2013). Therefore, based on the example given above, it could be suggested that

each participant in a dyadic interview has equal opportunity to develop their personal narratives regarding the research topic, and hence allowing researchers to generate rich data and an in-depth understanding of the phenomenon under investigation (Bjornholt & Farstad, 2014; Korzenny & Korzenny, 2005). Additionally, similar to the focus group, the dyadic interview also consists of interactions; sharing and comparing opinions which eventually leads to an agreement on the studied topic (Morris, 2001). In summary, the dyadic interview is practical “when the researcher wants both social interaction and depth, when narrative is valued, and when interaction in larger groups might be problematic” (Bell & Campbell, 2014, p. 1).

In the current work, the dyadic interview was used in conjunction with observations. This method was employed to elicit the thoughts and mental strategies of the participants, which happened to be the essential elements of the communication strategies that could not be captured via observations (Nakatani, 2012). As mentioned earlier, prior to conducting the interview, 15 dyads were formed for the interview sessions. The time and place of the interviews were determined by the participants, with all the pairs agreeing to have the interview immediately after the elicitation tasks. The interview session took approximately 60 minutes. All the interview sessions were recorded using digital voice recorders. Using recorders to tape the interviews was useful as I would subsequently be able to play back the recorded data for transcriptions. The pairs in the present study were those who had a pre-existing relationship; specifically, the pairs who completed the elicitation tasks together were again paired for the interview sessions.

By doing so, a comfortable interview environment and a sense of camaraderie among the participants could then be achieved (Bell & Campbell, 2014; Morgan, et al.,

2013). I noticed that the participants were able to encourage and help each other to express their opinions and thoughts on the topic being discussed. They were also able to share their insights on the strategies employed in the elicitation tasks. However, undeniably, there were also times where one of the participants dominated the interview session, which happens to be the shortcoming of the dyadic interview approach (Wilson & Onwuegbuzie, 2016). Even so, Morgan, et al. (2013) argue that the domination in the dyadic interview is still moderate compared to focus groups.

In the present study, the semi-structured interview format was used for the dyadic interviews. This type of interview encompasses the features of both structured and unstructured interviews (Wellington & Szczerbinski, 2007). As with the structured interview, the semi-structured interview also requires the researcher to prepare a list of questions prior to conducting the interview. However, the questions in the semi-structured interview are used only as guidance to help the researcher define the issues that should be addressed in the interview sessions (Gill, et al., 2008). Flexibility is the specific feature that the semi-structured interview shares with the unstructured interview. In this respect, flexibility, which is absent in the structured interview, refers to the freedom given to the participants to develop their own thoughts and ideas on the topics discussed during the interview sessions (Denscombe, 2014). For instance, in my study, the participants were allowed to respond freely and spontaneously to the issues raised throughout the interview sessions based on the open-ended questions that I had prepared. I also asked questions based on the participants' responses to the topic being discussed; specifically, the participants were asked for possible reasons why they had resorted to communication strategies in communication. However, in the present study, it should be noted that I decided not to ask the participants to provide reflections on each CS they used in communication. The reason behind this decision was "to avoid

danger of reducing participation due to the commitment in time that this would require” (Hung, 2012, p. 89). To answer the third research question, their opinions about the effects of using mobile devices as a CS in communication were also elicited via interviews. They were also asked to provide explanations for the applications used in mobile devices during the elicitation tasks.

Having explained the methods used in my study, the following section discusses the approach taken in researching CS.

3.6 Approaches in Researching CS

In this section, I will explain the laboratory and naturalistic study featured predominantly in the discussions of communication strategies. Following these two approaches, the quasi-natural elicitation CS research approach that I developed to study CSs in the present study will be discussed. The reasons behind this choice are also explained.

3.6.1 Laboratory Study

Most of the literature reveals that CS researchers undertake laboratory studies to research CS (e.g., Ghout-Khenoune, 2012; Haastrup & Phillipson, 1983; Paribakht, 1984). A laboratory study is conducted by assigning participants to interact in ‘artificial tasks’ in laboratory settings. Laboratory setting refers to a “venue especially arranged for data collecting” (Foster, 1998, p. 1). Early attempts to study communication in laboratory settings were carried out by Krauss and Weinheimer in the mid-60s (1964, 1966 and 1967) and later followed by other CS researchers such as Genesee (1983) who conducted a study on the use of communication strategies among the participants in a testing room (Bialystok, 1990). Rubin, et al. (2010) explained that in laboratory

research, participants are purposely removed from their natural settings and are assigned to interact in artificial tasks in a controlled setting (e.g., language laboratory). The reason for assigning participants in laboratory settings is to minimise or at least control any external variables (e.g., noise or the presence of other people) which might affect the phenomenon under investigation (Rubin, et al., 2010).

Carrying out laboratory studies may be practical for the researchers, e.g., second language scholars, as this technique allows them to isolate variables affecting the studied phenomenon (i.e., communication strategies) (Bialystok, 1990; Gass & Mackey, 2011). However, Gavin (2008) argued that the laboratory study is not without drawbacks; the contrived nature of the laboratory setting may somehow affect the behaviours (i.e., the use of communication strategies) portrayed by the participants. This view was supported by Rubin, et al. (2010) in which they asserted that the participants might communicate differently if they are moved out from their natural surroundings. Other than that, laboratory study does arguably lack ecological validity (Hulstjin, 1997). In general, ecological validity is “the extent to which research findings would generalise to settings typical of everyday life” (Baumeister & Vohs, 2007, p. 275). Since laboratory research is highly artificial and remote from real-life situations, it would be difficult to relate the findings gained from laboratory research to what actually happens in real-life situations and learning (Baumeister & Vohs, 2007; Gass & Mackey, 2011).

Despite its drawbacks, laboratory studies have seen widespread use to research communication strategies since the 1970s. However, now, in the twenty-first century, I do believe that the laboratory study may no longer be the best approach for exploring a wide array of communication strategies, e.g., the use of mobile devices. The reason is that the controlled nature of the laboratory setting may somehow restrict the participants

from portraying their actual behaviours. That is, they might not resort to their mobile devices naturally during interactions in the artificial surroundings. Therefore, it was essential for me to break away from the laboratory study to ensure I would be able to capture the use of mobile devices as one of the CSs, which is the phenomenon that my research is concerned with.

3.6.2 Naturalistic Study

Apart from lab-based research, the naturalistic study is another type of procedure used in language research (e.g., O'Grady, 1997). This can be described as spontaneous interactions which may happen between speakers (e.g., learners, families, friends, and others) in real-life settings (e.g., cafe, supermarket), that could be naturally captured via observations or recordings (Blom & Unsworth, 2010; Mackey & Gass, 2016). Meanwhile, the term natural settings is defined as the “phenomenon outside of the laboratory and in the everyday world in which people are found most of the time” (Brandt, 1972, p. 9). Naturalistic data collection is useful in interaction-based research as it has the potential to help researchers gain an in-depth understanding of the language utilised by the interlocutors. Also, conducting a study in naturalistic contexts allows the researcher to collect a large amount of data on the behaviours under investigation (Gass & Mackey, 2011).

However, despite the benefits of naturalistic studies presented above, there are also numerous drawbacks associated with this research approach. First, Bialystok (1990) claimed that it is ineffective to conduct a naturalistic study to explore a highly specified event. For instance, if a specific phenomenon is the focus of the study, such as the use of strategies for referential communication, one may have to wait days for any spontaneous production of relevant data (Bialystok, 1990). Similarly, Gass and

Mackey (2011) asserted that the naturalistic study is ineffective if a researcher aims to examine a particular linguistic structure (e.g., question) as it may not occur naturally very often, whereby they might need to spend a substantial amount of time recording the language samples elicited from the participants to ensure sufficient instances are gathered to analyse (Cohen, 1996).

Second, it is difficult to conduct studies in natural settings due to the presence of extraneous variables (i.e., noise) (Rubin, et al., 2010) which eventually makes the result gained potentially difficult to interpret (Bialystok, 1990). Therefore, it could be assumed that it is not feasible to adopt naturalistic study for the current work which explores a particular phenomenon, i.e., the employment of CSs in communications. More important, since this study also explores the use of mobile devices as one of the CSs, it could be time-consuming to wait for them to use their mobile devices naturally. Thus, another kind of procedure should be introduced to replace naturalistic study. However, as mentioned previously, laboratory study is also unsuitable for the current work.

Therefore, to overcome the issues in researching CS mentioned above, I decided on an alternative approach, that of ‘quasi-natural CS elicitation research approach’, to research CS in the present study.

3.6.3 Quasi-natural CS Elicitation Research Approach

The word *quasi* used in quasi-natural is adapted from the term quasi-experiment. *Quasi* means ‘as if’, ‘almost’ or ‘to a degree’ (Mangal & Mangal, 2013; McBurney & White, 2009). Scholars have mentioned that a quasi-experiment, or field experiment, is the one that resembles an experiment, but it is not a true experiment. This is because it

does not possess all the features of the experiment (see e.g., Cohen, et al., 2011; Privitera, 2017). Likewise, a quasi-natural CS elicitation research approach may look *as if* it is a naturalistic study, but it is not a true naturalistic study in the real sense. The reason is because the quasi-natural lacks one very important aspect of a naturalistic study: capturing the naturally occurring data in a natural setting without intervention. The quasi-natural, by contrast, employs elicitation tasks in the natural setting to capture the data (i.e., in this instance, communication strategies).

To the best of my knowledge, no CS studies have mentioned the quasi-natural CS elicitation research approach in eliciting CSs. Thus, the invention of this research approach in the present work contributes to the CS literature. Specifically, the quasi-natural CS elicitation research approach implemented in my present work combines both unnatural and natural elements to research CS. The unnatural element refers to the ‘artificial tasks’ while the latter relates to ‘natural settings’ in which the data is actually collected. In comparison to other CS studies, the current work employed the artificial tasks in natural settings. The use of natural settings as a research context in quasi-natural elicitation research approach is adapted from the quasi-experiment and naturalistic study approaches. I carried out this research approach by assigning my participants to complete the artificial tasks in various real-life surroundings, such as a garden, cafe or hotel lobby, to elicit their actual usage of communication strategies.

The use of natural settings as the places to gather data also allows naturalness and spontaneity. By carrying out a study in natural settings, high ecological validity could typically be achieved (Coolican, 2013). This means the findings of the study gained from natural settings reflect the actual behaviour performed by the participants of the study. In such a sense, it could be inferred that the findings attained from the

quasi-natural CS elicitation research approach mirror the genuine behaviours of the respondents.

Apart from this, using the quasi-natural CS elicitation research approach in my study may prevent any intrinsic bias. The concept of intrinsic bias, which comes from single method, single observer, or single theory studies, might be overcome if a researcher combines multiple observers, theories, methods, and data sources (Denzin, 1989). Likewise, the quasi-natural CS elicitation research approach that integrates two different elements (i.e., natural and unnatural) from two different techniques (e.g., laboratory and naturalistic) may be considered distant from intrinsic bias, which eventually made this worthy for my study. Other than that, the quasi-natural CS elicitation research approach also benefits from the strengths of both laboratory and naturalistic methods. The artificial tasks used in the quasi-natural CS elicitation research approach are suitable to elicit the highly specified phenomenon, i.e., communication strategies. In addition, via the artificial tasks I did not have to wait for days for the participants to employ CSs and mobile devices because the artificial tasks acted as a 'tool' to stimulate the participants to employ CSs and mobile devices in interactions.

Based on these explanations, I believe that it was reasonable to draw on the quasi-natural CS elicitation research approach for the present work as I would be able to shed some light on the area of communication strategies, particularly on the use of mobile devices as one of the CSs. This particular research approach might also be a potential contribution to CS studies as, to my knowledge, no previous CS studies have highlighted it.

The following section discusses data collection procedures.

3.7 Data Collection Procedures

Before I conducted this research, ethical approval was sought and obtained from the School of Education Ethical Review Committee. Following that, I then contacted the gatekeepers of University Utara Malaysia to gain access to their setting for participant recruitment and fieldwork purposes. Once this permission was granted, the participants were recruited for both the pilot and the main study. Detailed explanations about the pilot and the main study are provided in other sections (see sections 3.7.1 and 3.7.2). To address the ethical issues, I informed the potential participants of the general aims of my study in information sheets distributed either through email or by face-to-face contact. The potential participants were then asked to complete the demographic background questionnaires, with their informed consents, either verbal or in writing, gained before they could do this. Those who fitted the requirements I had set were then recruited as participants. I then arranged for the elicitation tasks and interview sessions to be conducted with the enlisted participants. Again, their informed consent was gained before I could proceed with these.

3.7.1 Pilot Study

Pilot studies can be referred to as “mini versions of a full-scale study (also called ‘feasibility’ studies)” (van Teijlingen & Hundley, 2002, p. 1). By carrying out a pilot study, a researcher would be able to unearth any problems and resolve them before commencing with the main project. Other than that, a pilot study would be able to address a number of logistical issues which may increase the possibility of the success of the main project (Gass & Mackey, 2011). The following elements are examples of logistical issues that could be addressed before undertaking the main study:

- 1) Developing and testing adequacy of research instruments
- 2) Checking that instructions are comprehensible
- 3) Assessing the feasibility of a (full-scale) study/survey
- 4) Assessing the likely success of proposed recruitment approaches
- 5) Identifying logistical problems that might occur using proposed methods
- 6) Estimating variability in outcomes to help determining sample size
- 7) Collecting preliminary data

Sources: Festing, et al. (2002) and van Teijlingen and Hundley (2002)

In relation to my study, piloting was undertaken to address the first and second elements stated above. To be specific, I tried to a) identify the suitable elicitation tasks for the main study, b) test out the interview questions, c) determine the feasible natural settings for the main study, and d) determine the comprehensible instructions for the elicitation tasks.

In this pilot study, there were no specific criteria used in selecting the participants and, therefore, I just randomly recruited ten participants who were willing and able to take part in it. They were undergraduate and postgraduate students of different disciplines and nationalities backgrounds.

3.7.1(a) Piloting the Elicitation Tasks and Settings

Different settings such as the university cafe, coffee shop, courtyards, and their homes (living rooms) were chosen to accomplish the object identification task, picture sequence task, and role-play task. These venues were chosen based on the participants' preferences. The participants performed the following tasks in pairs:

1. Object identification/description task: the participants were required to name the objects in the photographs.
2. Picture sequence task: the participants were asked to arrange and name each stage of the life cycle of a frog.
3. Role-play task: the participants were asked to interact based on the roles and situations given.

In the object identification task, eight photographs of real-life objects and two other filler items were used (see Appendix D). The filler items, according to Poulisse and Schils (1989) and Littlemore (2003), refer to objects that would certainly be known by the participants. These filler items were used to encourage participants to interact with each other (Littlemore, 2003). In the first task, which was the object identification, two different roles were assigned to the participants with these roles able to be reversed until they finished naming all the objects in the pictures provided. Specifically, one of the participants was asked to look at a coloured photograph given by me and needed to describe the object in the photograph to the other person. From the descriptions given, the other participant was required to name the object in English, and the task was regarded as complete once they announced the correct name of the object. As for the picture sequence task (see Appendix E), each participant was given a different set of pictures adapted from Ur (1981). The pictures were the stages of the life cycle of a frog. Without looking at each other's pictures, the participants were required to describe their own pictures so both could name the stages that each had. The participants were also asked to discuss and agree on a sequence.

In the role-play task, the participants needed to complete two different themes of role-plays. The first was a decision-making task role play (*Holiday at Tioman Island*), whilst the second was an information sharing task role play (*Lunch at Friend's House*). These two role-play scenarios were adapted from (Kost, 2008) (see Appendix F). They were given a role based on the scenarios prepared and were instructed to read the information provided to them. The role play task was separated into two sections - preparation and interaction. During the preparation stage, the participants were allowed to use and do whatever they wanted to prepare for the role play except for discussing it with each other. Similar to the preparation stage, participants were still free to use and

do whatever they wanted throughout the role play. Once the participants had completed the tasks, they were interviewed using the interview questions that I had prepared.

After piloting, I managed to gain some ideas and insights on how to conduct the the main study. Thus, some changes and modifications were made before undertaking the main study. Regarding the elicitation tasks used, it was found that all three tasks were feasible for use in the main study. I discovered that participants managed to interact with each other throughout the three tasks prepared for them. For the first task, that of object identification, some participants complained that the objects in the pictures were difficult to explain. However, considering that they were still able to complete the task despite the difficulties they mentioned, I decided to use the same pictures in the main study. The second task, the picture sequencing, was kept without any changes. However, I decided to use one of the five pictures of the frog life cycle as a ‘tool’ to further stimulate their language production and maintain their motivation for the tasks.

For the role play, the first scenario, i.e., the information sharing task of “*Lunch at Friend’s House*” was chosen for the main study. However, the second scenario, i.e., the decision-making task of “*Holiday at Tioman Island*” was excluded as the participants complained that the topic was very familiar, dull, and could be effortlessly described by them. For that reason, I replaced the second scenario with “*Holiday in Munich*” (see Appendix E) which could be considered more challenging and appropriate for university students’ level. As mentioned previously, the instructions to be used in all three elicitation tasks were tested in the pilot study. The first instruction was “*You are free to use any techniques, strategies or language items to complete the task*”. The second one was “*You can do and use whatever you like to complete the task*”. After the

pilot test, I decided to use the second instruction as it was sufficiently effective for the participants to understand. They managed to comprehend the instruction and employed various communication strategies in the elicitation tasks. Unlike the second instruction, the first instruction, which included the words “techniques, strategies or language items”, was too much like technical jargon, which made it unsuitable for use in the main project.

Among the natural settings tested in the pilot study, the living room was excluded as it was not sufficiently feasible, whereas other settings that allowed the mobile devices to be readily available in that particular context remained.

3.7.1(b) Piloting the Interview Questions

The interview questions were also tested in this small-scale study. I discovered that the participants managed to understand the interview questions that I had prepared. They were also able to share valuable opinions and feedback about the topic under investigation (i.e., communication strategies). Therefore, I decided to use the same interview questions for the main study.

In summary, I discovered that the whole procedures employed for data collection were feasible. Other than that, I managed to gain authentic experience in undertaking the study. The piloting also provided me with enough information on how to deal with the whole data collection process in the subsequent main study.

3.7.2 Main Study

Overall, the main study was conducted the same way as the pilot study, but there were a few exceptions. At this stage, the number of participants was different. As stated

earlier, 30 participants were recruited for the main study, specifically, 15 Malaysian ESL speakers and another 15 ESL/EFL language speakers of other nationalities. The participants were chosen based on criteria I had set and how they answered the demographic background questionnaires. They were then paired to engage in the three elicitation tasks determined after the pilot study. These elicitation tasks sessions were all conducted in natural settings. The duration of these sessions varied from one pair to another. However, most of the pairs completed the elicitation tasks within two hours. The elicitation tasks sessions were observed and recorded using video cameras that I had set up. In addition, digital voice recorders were provided for the participants as these allowed for better sound quality. The same 15 pairs of participants were subsequently interviewed. The decision to carry out the interview sessions was based on the participants' availability. However, all of them chose to be interviewed immediately upon completion of the elicitation tasks, which I eventually found was convenient for both parties.

Once I finished my fieldwork, the recorded data gained from the observations and dyadic interviews were then transcribed, analysed, and interpreted using a qualitative analysis approach. Further explanation of the qualitative data analysis is provided in the following section.

3.8 Qualitative Data Analysis

Qualitative data analysis refers to the process of making sense of the data through different stages: transcribing the data, discovering patterns and developing themes within the data, and making an interpretation of the phenomenon under investigation (Gill, et al., 2008). In the current work, I have utilised thematic analysis (TA) to analyse my qualitative data (Braun & Clarke, 2006). Here, I will focus on the

constructivist approach adopted as a framework to interpret the phenomenon being studied, as introduced in section 3.1. The constructivist (or interpretive) approach recognises multiple realities. Multiple realities in this sense refers to the various personal meanings created by the participants with regard to the phenomenon being studied (Denicolo, et al., 2016).

In making meanings of the phenomenon under investigation, two types of perspectives that are central to the constructivist approach are adopted. The first is the *emic* perspective or the ‘insider’ perspective. By applying this approach, I had to attempt to understand the participants’ subjective meaningful experiences with regard to the studied topic. In combination with the *emic* perspective, the *etic* perspective (outsider’s point of view) is also practiced in this study. The *etic* perspective refers to the researcher’s beliefs or opinions of the participants’ views regarding the studied phenomenon. In relation to the current work, I have imposed my own inferences and interpretations of the studied phenomenon based on the participants’ words or their observed behaviours (Depoy & Gitlin, 1994; Hennink, et al., 2011).

Additionally, the constructivist approach acknowledges that the interpretations of the studied phenomenon are usually influenced by the researcher’s background, history, context, and prior understanding of people or the research issue (e.g., Lipu, et al., 2007). Thus, with regard to this research, it should be acknowledged that my own social background and personal experiences have significantly shaped the way I interpreted the phenomenon under investigation. Apart from that, Depoy and Gitlin (1994) also mentioned that the participants’ perspectives of the studied phenomenon are also affected by the contexts of their lives, e.g., the social, economic, cultural context,

and therefore, I, as a researcher, need to accept, embrace, and understand the contextual influences attached to the participants' narratives in making sense of the studied topic.

The interpretations of the data presented in this study are based on my own understanding of the phenomenon studied. However, it should be acknowledged that the interpretations that I have made are not to seek or confirm the 'truth' or 'facts', but rather to develop richer insights into people's meanings with regard to the studied topic. Seeking understanding of how people perceive something or an issue is consistent with constructivism, which happens to be the paradigm of choice for the current work. Constructivism, as an underlying philosophy, also takes the stance that "there is not one exact world that everyone understands in the same way" (Pfister, 2009, p. 10). In such a sense, each person constructs their own meanings differently, even in relation to the same phenomenon. Thus, I am aware and understand that other individuals who conduct or read my research may reach different interpretations of the phenomenon studied. Having explained the constructivist approach as a framework to interpret the phenomenon under investigation, I will now discuss the thematic analysis, followed by the steps taken to analyse my observational and interview data.

3.8.1 Thematic Analysis

Thematic analysis, as defined by Braun and Clarke (2006), refers to a method used for identifying, analysing, and reporting (themes) within data. This method, as stated by Mohammed Ibrahim (2012), is suitable for any studies that intend to discover the studied phenomenon using interpretations, which happened to be the aim of my study. By adopting this approach, I was able to search for the significant themes within the data that relate to my research questions. However, it should be noted that thematic analysis utilised in the present study only works as a framework for organising my data

systematically and utilising this method did not hinder me in terms of applying my own perspectives in generating the meaning of the data. As noted by (Hatch, 2002) “...having a model that provides a framework for organising analysis neither prohibits nor necessarily inhibits researchers in any of the qualitative paradigms from applying their special perspectives to making sense of their data” (p. 151).

Additionally, thematic analysis also enables the researcher to identify themes at an explicit and latent level. Thematic analysis at the explicit level refers to identifying the themes within the surface meanings of the data (Boyatzis, 1998), whilst latent thematic analysis refers to exploring for themes which are present in the data but not directly observable (Bice, 2016). In relation to my work, the themes presented in Chapter four have been identified at a semantic and latent level, which results in a more nuanced understanding of the phenomenon under study.

Apart from that, thematic analysis is a useful method when investigating an underexplored area or phenomenon (Braun & Clarke, 2006). Another reason for choosing this method is because it does not embed in any theoretical construct or particular discipline, making it a flexible and useful research tool that can “potentially provide a rich and detailed, yet complex account of data” (Braun & Clarke, 2006, p. 5). Being detached from any theoretical construct also means that the thematic analysis is suitable for use “across a range of theoretical and epistemological approaches” (Braun & Clarke, 2006, p. 5). Based on the justifications provided above, thematic analysis is considered suitable for the current study. In the next section, I will present the six phases of thematic analysis applied when searching for themes within my data.

Below is Thematic Analysis table from Braun and Clarke (2006) which I used as guidelines to analyse my data.

Table 3.2 Phases of Thematic Analysis (Braun and Clarke, 2006, p 87)

Phase	Description of Phase
1. Familiarising yourself with your data	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes	Checking the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
Defining and naming themes	On-going analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.
6. Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis

3.8.1(a) Data Familiarisation (Transcribing the Data)

'Familiarising yourself with your data' is the first phase of thematic analysis. In this stage, the researcher needs to immerse themselves in the data that have been collected to acquire "an overall sense or feel for the data" (Wellington, 2015, p. 261). Familiarisation with the data is an essential part of thematic analysis as it "provides the bedrock for the rest of the analysis" (Braun & Clarke, 2006, p. 87). Therefore, it is advisable that researchers do not skip over this phase, which can, and should, be considered the pillar of the data analysis. Transcribing the data, as suggested by Caulfield and Hill (2014), is one of the familiarisation processes that could lead to successful data analysis. Transcription refers to the process of transforming the data that have been collected into a new representational form. Based on the literature, there are no specific guidelines for preparing the transcriptions (Davidson, 2009), and only the researcher can determine what to transcribe, what to leave out, and so whether to

transcribe all the data or otherwise (McLellan, et al., 2003; Rossman & Rallis, 2003). Even though researchers can prepare transcriptions based on their own judgment, Davidson (2009) reminds researchers to carefully consider how to transcribe data before producing a transcription. In this way, the transcription formed will be able to address the research questions and meet the needs of a particular study. Thus, I decided to transcribe my observational and interview data in the following manner.

Observational data

I transcribed only the selected paragraphs of the observation data that was relevant to research questions (RQ) 1 (a) (b), (c), 2 and 3. This action was taken following the guidelines by Strauss (1987) and Li (2012) who argued that for some analyses, it may only be necessary to transcribe the selected sentences, paragraphs, or stories that are relevant to answering the research question or theory. Even though I only transcribed the selected parts of my observation data, I still needed to spend long hours watching and listening to the video recordings repeatedly. This was done to ensure I did not miss any essential words or parts uttered by my participants.

In detail, I transcribed only the ‘intended meaning’ within a piece of utterances and leaves out the nuances of speech of action such as voice intonation, overlap in speech, or non-verbal communication forms such as gestures or gazes embedded in the talk. This kind of transcriptions technique is known as unfocused transcription as it focuses on the ‘intended meaning’ of speech or action gained from the participants, without counting in its detailed contextual or interactional characteristics (Gibson & Brown, 2009); in other words, unfocused transcription identifies what the participants say rather than how they say it. However, Gibson (2010) also argued that researchers may draw attention to these aspects (i.e., interactional characteristics like voice tone) at

some point in the research, whenever they consider necessary and relevant to the study. I therefore incorporated some basic signs of transcription adopted from Jamshidnejad (2011) and Dooly (2018) that I considered appropriate to this study. An example of my transcribed observation data is presented in Figure 3.1 below.

1. Syutera	You know the name? I know the name of this thing but in Malay. ((eyes on the phone and continued scrolling))
2. Ozmen	I don't even know the name of it in my language, so I have to <i>Google</i> it. ((using his phone))
3. Syutera	Oh okay ((silence))

Key for transcription
Communication strategies are in italicisation form
((text)) annotator's notes

Figure 3.1 An example of transcribed observational data

Interview data

I firstly transcribed the entire set of audio recordings into verbatim quotations prior to the coding process. Once completed, I then read the written data while replaying the recordings to verify the transcription multiple times to familiarise myself with the data. Regarding the translation process of this study, one of the 30 participants asked to be interviewed in Malay, which happens to be my native language. Further, since I must present the data in English, I translated the interview data from Malay into English. I decided to translate the data on my own since I speak and understand the Malay language and to mitigate the risk of misinterpreting, misunderstanding, and losing the respondent's intended meanings (Smith, et al., 2008). Next, I will explain about coding and theming the data.

3.8.1(b) Coding the Data

Coding, as described by Walter (2006), involves marking the coded segments of data, either in words or short phrases. The codes marked essentially refer to any issue, topic, idea, or opinion articulated by participants identified through reading the data line by line (Caulfield & Hill, 2014; Hennink, et al., 2011). In coding the data, Braun and Clarke (2006) advise researchers to code as many potential segments as possible. This is in line with Caulfield and Hill (2014), who assert that it is better to be over-inclusive than under-inclusive in the coding process to avoid missing important or interesting detail from the data. Therefore, I simply coded all relevant and interesting codes in the current work before collating them into themes. The coding process is merely intuitive, and there is no ‘right’ or ‘wrong’ in determining the codes in the data. Furthermore, Michael and Hammond (2013) also claimed that there is no consensus in the approach one should adopt to a coding system. Knowing this, I, as a researcher, am free to select or mark any elements of the data that attract my attention.

I have also utilised both deductive and inductive strategies in searching for the codes within the data. The codes originating from the research questions, relevant literature, or taxonomy could be considered to be deductive codes (Boyatzis, 1998; Given, 2008), whereas the codes developed from reading the data systematically are known as inductive codes. Next, I will describe the steps taken to generate the initial coding from my observational and interview data.

Observational data

While listening to and watching the recordings, I tried to identify and code the data segments that fit the categories listed in the Dörnyei and Scott CS Taxonomy (1997) that I used as a guideline to answer research question (RQ) (1) and its

subquestions (types of CSs) (see Appendix H). In addition, I also wrote down the emerging CSs found in the observation data. Besides using the taxonomy as a checklist, I also decided to code CSs that occurred in my data following Flyman's (1997) recommendation. She argued that researchers need to include their own intuition in the identification process of CS "since it is hard to find a reliable method for identifying communication strategies. Sometimes a correct utterance can be a strategy, making it hard to recognise" (Flyman, 1997, p. 63).

In answering research questions (RQ) (2) and (3), the aim of which was to identify the CS factors, functions, and effects, I used the research questions and the relevant literature that has been reviewed as a basis for coding the data. While watching and listening to the videos, I took notes and coded data segments and relevant images that answered these research questions. It was indeed a daunting task, particularly in determining the functions of CS, as I needed to carefully and repeatedly watch and listen to the videos to identify the functions of CS for each CS that appeared in the data. In general, I coded the extracts of data as suggested by Braun and Clarke (2006) "initially identify the codes, and then match them up with data extracts that demonstrate that code" (p. 19) in answering (RQ) (1) and its subquestions, (RQ) (2), and (RQ) (3). I later combined all the coded data during the transcription process with the fieldwork notes to gain a holistic picture of the observations.

Interview data

I used the digital CAQDAS package ATLAS.ti to code my interview data which will be explicated in detail later ⁶(see section 3.9). Before coding the interview data, I initially transcribed the interview data using Microsoft Word. Once completed, I

⁶ Computer Assisted Qualitative Data Analysis Software (CAQDAS)

uploaded all the fifteen transcripts into ATLAS.ti. into a single folder named ‘data analysis interview 2’, which represents the specific project that I was working on (Silverman, 2013). In consideration of research questions 1(a), 1(b), 1(c), I created free codes to jot down all the Dörnyei and Scott (1997) communication strategies. Afterwards, I began to read the interview transcripts inclusively on screen. While reading these, I began to highlight the ‘quotations’ – segments of data to match up with the predetermined codes established earlier. Furthermore, at the same time, I also generated new initial coding based on the descriptions made by the participants, i.e., emergent coding in line with inductive research. Additionally, in my attempt to answer research questions (2) and (3), the same process was undertaken, which required me to read through the interview transcripts numerous times. While carefully reading the interview data, I concurrently selected the phrases or expressions that were relevant to answering (RQ) (2) and (RQ) (3). I then immediately created the new codes and tagged them alongside the highlighted text. In addition, relevant literature reviews and the research questions to the study were also used as a guideline to identify codes for (RQ) (2) and (RQ) (3).

At the end of the coding process, a huge number of codes had been generated from the data. To organise these codes, the next step, i.e., theming the data, was employed to assign these codes to themes. A screenshot of the codes coded in the interview data using the ATLAS.ti. is presented in Figure 3.2.

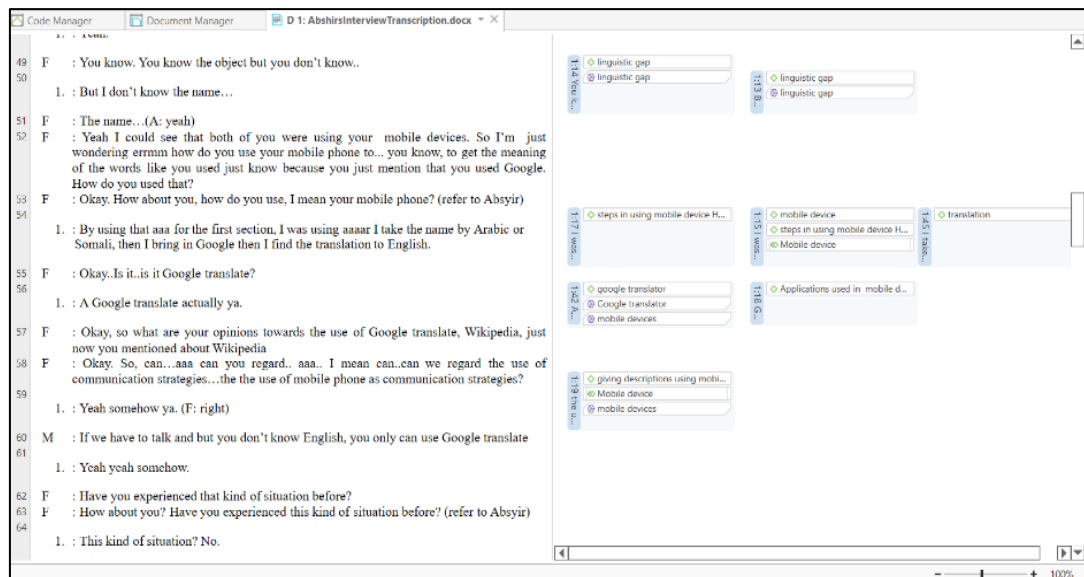


Figure 3.2 A sample of coded codes in the interview data

3.8.1(c) Theming the Data

Theming the data consists of three steps before producing the report. The first is searching for themes, the second is reviewing, and the third is defining and naming themes. The steps taken are explained below. In searching for themes, this phase involves categorising all the different codes gathered from the data into potential themes and attaching the relevant coded extracts to the specific themes (Braun & Clarke, 2006). The second stage of theming the data requires the researcher to review the themes, that is 1) “reviewing at the level of the coded data extracts” and 2) “reviewing at the level of the themes” (Braun & Clarke, 2006, p. 91). For the first level, one is required to check whether the determined themes tallied with the coded data extracts, whilst for the second, one needs to check whether the themes formed reflect the meaning of the data altogether. The final stage prior to producing report is defining and naming the themes. By doing this step, Braun and Clarke (2006) stated that the “essence” of the themes could be accomplished. In this respect, essence means that the researcher should be able to determine “what the theme says and what it is about and what aspects of the data are

covered by the theme” (Javadi & Zarea, 2016, p. 38). This stage also requires one to identify whether the themes produced contain subthemes or otherwise.

Once completed, the names for the generated themes should be given before presenting them in the analysis chapter. As argued by Boyatzis (1998), the names given to the themes should be “a) conceptually meaningful to the phenomenon studied; b) clear and concise, communicating the essence of the theme in fewer words possible; and c) close to the data” (p. 31).

3.8.1(d) Producing the Report

Producing the report is the final phase of thematic analysis. At this stage, I had already identified a set of themes, and I was ready to present them in the written form. In writing the report, one should ensure the story of the data is presented concisely, coherently, logically, and without repetition. The vivid examples (data extracts) which portrayed the themes were also chosen for inclusion in the report. It is important to consider the aforementioned aspects in writing the report to convince the readers of the merit and validity of the analysis (Braun & Clarke, 2006). These steps are applied to my observational and interview data as explained below.

Observational data

To search for potential themes gained from the observation data, I looked closely at the connections between codes, combined, clustered, or collapsed, before assigning them to potential themes. Regarding (RQ) (1) types of communication strategy, I first grouped them according to the taxonomy that I used as guidelines. Secondly, I refined and reviewed the themes by grouping them into emergent themes and finally named them as traditional and digital CSs. As for RQ (2), the factors,

functions of CS and (RQ 3), the effects of using mobile devices as a CS, the codes identified in the data related to these three RQs were grouped into emergent themes.

Interview data

I gathered similar or closely related codes under one potential theme using the software in relation to (RQ) (1) and its subquestions, (RQ) (2) and (RQ) (3). This was accomplished by assigning the interrelated codes into 'families'. 'Families' in this regard refers to the candidate themes created using the ATLAS.ti application, which are used to allocate connected codes under one roof. At the same time, I also manually drew multiple mind maps on paper to sort out the different codes. The mind maps somehow helped me to clearly see the similarities and differences in the codes gathered. To be honest, this was the messiest stage as I needed to carefully scrutinise all the different codes and assign them into potential themes. Once all the potential themes were determined, I then assigned all the relevant coded extracts to these specific themes (Braun & Clarke, 2006). A screenshot of one specific theme generated by ATLAS.ti is presented below.

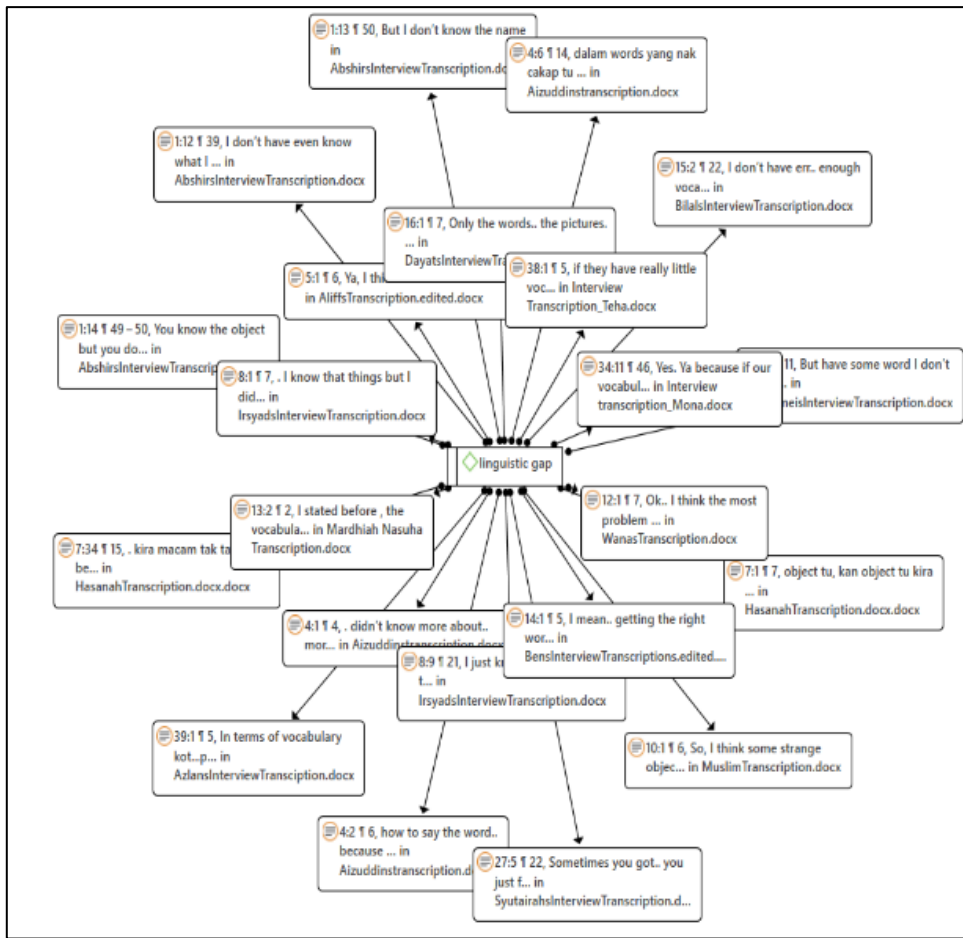


Figure 3.3 An example of a theme created with ATLAS.ti.

Overall, I have presented the steps taken in the analysis of my data. However, it should be noted that the datasets were initially analysed separately. Once completed, the findings from both datasets were triangulated and I selected the prominent ones, as presented in the findings section. The reasons for using triangulation in this study are further explained in section 3.10.

3.9 Using ATLAS.ti

Some researchers prefer to analyse their data manually while others may opt for a software programme to do the task (Wellington, 2015). In general, there are many available software programmes that researchers can choose from to help them with qualitative material. Examples of such software are NVivo, MAXDA and ATLAS.ti.

ATLAS.ti was developed by Thomas Muhr in a research project at The Technical University of Berlin in the early 1990s. This software was designed based on Glaser and Strauss' grounded theory coding principles. As noted by Muhr (1991) "... during the development of the program we were stimulated by the ideas, terminology, and methodological processes associated with 'grounded theory'..." (pp. 351-352). In such a sense, ATLAS.ti can be considered as the main software to be used in grounded theory research as the applications of this software support the coding and theory generating processes, which are the essential elements of grounded theory (Flick, 2009). However, Muhr (1991) further explained that "the functions offered by ATLAS/ti. are 'generic' in the sense that they may be the building blocks that serve other approaches" (pp. 351-352). Similarly, Sanchez-Jankowski and Dohan (1998) argued that ATLAS.ti is not only restricted to an analysis that uses a grounded theory approach, but is also suitable to facilitate any qualitative data analysis (QDA) that has grounded theory elements. The example of QDA which is consistent with grounded theory is thematic analysis.

Both grounded theory and thematic analysis share similar analytical procedures, namely coding the data, making constant comparisons between the codes or categories, creating linkages between the developed categories, and writing notes or descriptions during the analysis process (memoing) (Hesse-Biber & Leavy, 2008). However, the main difference between the two is that thematic analysis generates themes but not necessarily for the purpose of forming a theory, while grounded theory focuses on developing theories from the data (Child, 2015). Even though there is a slight difference between grounded theory and thematic analysis, the analytical steps of both are similar and, therefore, I believe it was appropriate to opt for ATLAS.ti for the current work as this software provides features that are also consistent with thematic analysis. Even so, Wright (2015) reminds researchers that ATLAS.ti is not specifically bound to any

methodological approach. Similarly, Friese (2015) also highlighted that this software works well with other qualitative research designs and analytical approaches. Here, I have considered that ATLAS.ti is suitable for use in thematic analysis.

3.10 Triangulation

Triangulation refers to the combination of different methods in studying the same phenomenon. This strategy, as claimed by Yeasmin and Rahman (2012), has become accepted practice in social science research. In general, there are four different types of triangulation proposed by Denzin (1978) and Patton (1999): a) theory triangulation - using different theories to analyse and interpret data; b) data source triangulation - using different types of sources to form a body of data; c) investigator triangulation - using two or more researchers in gathering and analysing data; and d) method triangulation - using two or more different research methods for data collection.

In this research, method triangulation was used to investigate the studied phenomenon, i.e., the use of CSs, including mobile devices in interactions and its factors, functions, and effects in communication. To be specific, two different qualitative research methods, namely observation and interview, were combined to answer my research questions. By combining these two methods, I would be able to answer the research questions established in the present study from different angles and, therefore, produce better knowledge of the studied phenomenon (Flick, 2009). Apart from that, richer information of the topic under investigation can be obtained via this triangulation technique. This is supported by Hatch (2002) in his mentioning that this technique is helpful for gaining extension of information from multiple sources.

Undeniably, all qualitative research methods have their own shortcomings and biases, and using a single method to study a given phenomenon will result in personal

biases. Therefore, the researcher should compensate for the limitations of one qualitative data collection through the strengths of the others. For instance, the use of observations in combination with interviews in the present study allows me to utilise the strengths of each method in order to better understand the phenomenon under investigation (Leech & Onwuegbuzie, 2007; Mason, et al., 2010). Based on the explanations given above, it could be concluded that combining different research methods in the current study was useful as it enabled me to generate a deeper understanding of the studied phenomenon.

3.11 Ethical Considerations

The term 'ethics' refers to the moral principles or guidelines used to guide conduct that are held by a group or even a profession (Wellington & Szczerbinski, 2007). Prior to undertaking a study, the researcher is required to go through several stages before they can embark on a research project. Here, I will describe the steps I undertook prior to conducting my research study. The core issues involving seeking permission and the rights and rules related to the participants are detailed in this section.

After the completion of my confirmation review, I immediately applied for research ethics approval from the School of Education Ethical Committee. This step was taken in accordance with BERA and The University of Sheffield (TUOS) regulations, which require all researchers to seek ethical approval prior to undertaking research. Together with the research ethics form, I submitted my Information Sheet and Participant Consent Form to be reviewed by the School of Education Ethical Review Committee. Once permission was gained, I then began to contact the gatekeepers of University X to gain access to conduct my study there. The relevant information regarding my research project was attached to the emails that I sent to them. After three

weeks, I was then granted access to recruit my participants and to use the facilities of University Utara Malaysia (UUM).

Afterwards, I continued with the next step, participant recruitment. Hammersly and Traianou (2012) argue that an ethic of respect should be applied to the participants involved in the study. This can include informing the proposed participants about the study beforehand. To do so, I distributed information sheets via email and through face-to-face contact with them. In the information sheets, they were informed of the purpose of the study and other relevant information regarding how the study would be conducted should they agree to become participants in the research project. The potential participants were also informed that their participation would be on a voluntary basis and that they could withdraw from the study at any time, should they so wish. Other than that, the participants were also assured that none of them would be labelled or identified in any way through their names. Hence, I have used pseudonyms in the thesis for all the participants and the university that I worked with. Other than that, they were informed that the information garnered from them would also be kept confidential and only be used for research purposes.

Those interested in participating were asked for their consent prior to the pilot and main study. I used two types of informed consent: verbal and written. Both verbal and written consent are identified as express form of consent, where both contain the same elements (Urden, et al., 2013). The only difference was that the verbal consent required the participants to verbally agree to participate while the written consent form required the participants to put their signatures to it. Once I obtained the participants' agreement, they were given demographic background questionnaires to complete. Those recruited via email were sent a link to the demographic background questionnaire

to be completed. Meanwhile, the participants that had been recruited in classrooms were given a paper-based demographic background questionnaire to complete.

Those participants who managed to answer all the questions with elaboration and met the specific criteria of being aged 22-35 years old, proficient in the English language, and had mobile devices were chosen as participants. At this stage, the information about the participants who did not meet the requirements was safely disposed of. The selected participants who agreed to take part in observations and interviews were informed through the written consent forms that their video-recorded interactions, and audio-recorded interviews, would be included in the research for analysis purposes.

In relation to data storage, I followed Gray's (2014) recommendations, namely, to make participants aware about data storage and access. Thus, I informed my participants that all data would not be accessible to third parties without their consent, except for authorised persons such as my supervisor and/or the examiners. I also informed my participants that any data obtained from them would be used for similar research purposes beyond the current project.

To summarise, I sought permission from the School of Education Ethical Review Committee as well as from University Utara Malaysia in which I conducted the study before I commenced my research project. Apart from that, I also provided the participants with the necessary information about my study and made them aware that their participation would remain on an entirely voluntary basis.

3.12 Chapter Summary

Throughout this chapter I have elaborated the entire process followed in conducting the research project. I commenced by describing the underlying philosophy of the current work, the constructivist paradigm. Then, I described the different steps taken in recruiting the participants, followed by the criteria used to determine who would be the respondents of the study. The methods employed for data collection and the challenges faced during the fieldwork were also mentioned. I then introduced the reader to the approaches to researching CS before highlighting my own CS research approach, which was exclusively developed for the present study. Finally, the approach taken in analysing the data and the ethical considerations in qualitative research were also presented.

CHAPTER 4

FINDINGS

This chapter explains the findings of my study through the data garnered from the observations and interviews. All the findings were generated in the form of themes according to the study's research questions. It begins with my participants' types of communication strategies, which helps answer the first research question and its subquestions. Next, the factors and functions of CS are reported, which attach to the second research question. The final section presents the effects of using mobile devices as a CS in communication, which addresses the third research question.

4.1 The Findings of Research Question One

1. Do the participants employ communication strategies in interactions?

- a) What are the examples of strategies being employed in interactions?
- b) Are mobile devices being employed in communication strategies?
- c) Which mobile device applications are being used to interact?

My data analysis revealed that my participants used a wide array of CSs in communication, with those I perceived to be significant to the study presented in the Table 4.1 below.

Table 4.1 List of important CSs of the present study

Traditional Communication Strategies		
Direct	Interactional	Indirect
Circumlocution	Appeal for help	Use of fillers
Code switching	Asking for clarification	Feigning understanding
Mime/Paralinguistic	Asking for confirmation	
Giving suggestions		
Digital Communication Strategies		
Google Search		
Google Translation		
Google Images		
Global Positioning System		
Mobile applications (Apps)		

4.1.1 Traditional Communication Strategies

4.1.1(a) Direct Strategies

4.1.1(a)(i) Circumlocution

Circumlocution refers to the use of descriptions to describe the characteristics or elements of an object or action instead of using the appropriate target language structure (Maleki, 2010). In other words, one can use circumlocution as an alternative to saying something that one does not otherwise know how to due to linguistic deficiency in the target language (Gass & Mackey, 2011). Circumlocution was the CS that was most frequently used by the participants of my study in communication. One of the examples was elicited from Fareel in the object-description task.

1. Fareel	This thing...its shape...it looks like a pen...colourful... has many, many colours.
2. Ayesha	Can we use it to write? Technology related or...
3. Fareel	No, no. Something like this ((holding his pen)). It's like a pen.
4. Ayesha	No idea.
5. Fareel	No idea? Well, it's like a pen, but it's not a pen. It has a tip here. You can use this thing to draw. Usually, children use this to draw. Well, it's something you use for colouring.
6. Ayesha	Crayon?
7. Fareel	Similar to crayon.
8. Ayesha	Coloured pencil?
9. Fareel	Yes.

(Extract 1)

This extract was elicited from Ayesha and Fareel from their communication during the object-identification task. As can be seen in the above narratives, Fareel started the interaction by articulating the characteristics of the picture given to him, **coloured pencil**. His action of giving descriptions about the intended item is known as circumlocution, as explained above. Despite the illustrations given, his partner, Ayesha had difficulty naming the object at once. To continue with the interaction, Ayesha then demanded further explanations about the target object by asking a question, as displayed in line 2. Fareel, then applied circumlocution. He provided Ayesha with additional explanations about the object, as portrayed in lines 3, 5, and 7. Finally, upon hearing the final illustration about the discussed item, 'similar to crayon' (line 7), Ayesha then managed to name the item correctly.

Additionally, my participants also shared how they used circumlocution in everyday communication during my interviews with them, of which the following examples are representative.

'...Oh ya, when speaking to my friends, I describe what the thing is, which for me is very helpful.' (Vana)

'I tend to describe and paraphrase a lot when I communicate with my foreign friends. My Nigerian classmates, their English is good, so I don't have a problem talking with them. However, when I speak to my friends who come from Somalia and other Arab countries, I must explain and describe a little bit more about something that I intend to tell them. This is because their English is not that good. They inform me that they only use their mother tongue back home. You know, like Arabs they only use Arabic language. Like Somalis, they use a little bit of Arabic and Somali language. Unlike Nigerians, as their English is good. Like last time we came across the word extravagant. My Arab and Somali classmates didn't know what that means. So, I verbally explained the meaning of the word to them and yes... I think it is necessary for me to do that.' (Sabby)

As for Vana, she disclosed using this CS when talking with friends and considered it of help. In the same vein, Sabby also acknowledged using this CS with her friends. As shown in the extract, she commonly adopted this CS when speaking to her foreign friends who originated from Somalia and other Arab countries to help them understand her intended messages. Overall, both would describe and paraphrase their messages, which are elements of circumlocution.

4.1.1(a)(ii) Code Switching

Code switching was also evident in the data. This strategy, as agreed by a majority of linguists, refers to “the use of more than one language in the course of conversation” (Gass & Selinker, 2008, p. 29), “whether at word or sentence level or at the level of blocks of speech” (Baker, 2001, p. 101). As further noted by Schmidt (2015), code switching is commonly practised among bilingual and multilingual speakers during communication. By definition, bilinguals and/or multilinguals are those who can communicate in more than one language (Wei, 2008). My participants, who happened to be bilingual and/or multilingual speakers, tended to frequently apply code switching in communication. Below are examples of code switching that they used.

1. Daya	It's part of nature. It's a symbol of Malaysia. This is usually used as a logo. We can see this during our Independence Day Celebration.
2. Hasena	Is that paddy?
3. Daya	No.
4. Hasena	Oh. That one is Kedah's symbol.
5. Daya	People use this as a design for baju batik
6. Hasena	Flower?
7. Daya	Ya. A type of flower.

(Extract 4)

This extract was taken from Daya and Hasena's communication during their object-identification task. Daya, who was given a photo of hibiscus, was observed to be exemplifying about the target item, as can be seen in line 1. Hasena, may be trying to guess the referent in asking the question 'is that paddy?' in line 2. Knowing the referent, Daya immediately said 'no', indicating the assumption made by Hasena was incorrect. Hasena, in reaction to Daya's answer, then provided more information about paddy as seen in line 5. This could have been done after realising that the object she named was not the symbol of Malaysia but rather a sign representing one of the states in Malaysia, Kedah. Daya, in trying to help her partner guess the discussed item correctly, come up with other descriptions about it, as can be seen in line 5, 'People use this as a design for *baju batik*'. Here, Daya switched to her native language, Malay, in addition to English, when giving her explanation about the target object. Daya supposedly mentioned *batik clothing* instead of '*baju batik*'. However, she uttered the Malay word *baju* to replace the word 'clothing', which might not have crossed her mind, resulting in the sentence *baju batik*.

Other representatives, namely Pilee and Fareel, also shared their experiences of using code switching in everyday communication. They said,

'I alternate between the Swahili language and English when speaking with my family and friends.' (Pilee)

'I code switch when I speak English with my friends.' (Fareel)

Both participants seemed to favour using code switching in communication, especially when interacting with family and friends.

4.1.1(a)(iii) Paralinguistic Strategy

The paralinguistic strategy is a non-verbal communication technique which encompass mime, facial expressions, eye contact, tone of voice, and/or using other body movements to communicate meanings in communication (Khalifa & Faddal, 2017). This concept, as further accentuated by Dörnyei and Scott (1997), refers to describing a thing or concept non-verbally or accompanying one's verbal strategy with a visual illustration in communication. Put simply, communicators can utilise paralinguistic strategies in two ways. First, one can describe an object or concept using gestures without uttering any single word. That means a word can be replaced with non-verbal signs (Mei & Nathalang, 2010). Second, an object or concept can be verbally described, and accompanied by a paralinguistic strategy as a means to add or complement their messages (Rosas Maldonado, 2018). In my study, I identified that my participants employed a paralinguistic strategy (i.e., gestures) in combination with verbal communication and, uniquely, they also utilised objects found around them as references while verbally communicating the intended messages. Examples of them using this CS are portrayed below.

1. Aizat	What do we call that?
2. Muslee	Big head (<i>pointed at his head using index finger</i>). Tail (<i>using the same finger to illustrate the tail of the object</i>). It looks like, and it looks like spermatozoa (<i>making hand movements to portray spermatozoa</i>). (Extract 8)

This extract was the interaction between Muslee and Aizat during the picture-sequence task. Aizat, who perhaps did not know the word **tadpole**, appealed for help from Muslee, as can be seen in line 1. Muslee, being a cooperative partner, then verbally described the word tadpole alongside his use of gestures.

The second type of paralinguistic strategy is shown in the images below.



Image 4.1: Sahana used the ashtray readily available on the desk to describe the functions of the target item (the funnel) to her partner during the task held at the hotel courtyard.



Image 4.2 : Vana and Alip used the bottle on their desk when talking about the target item, the funnel, at the cafe.

4.1.1(a)(iv) Giving Suggestions

Giving suggestions is a CS which emerged from my data. In the context of my study, this CS refers to a speaker giving suggestions to the interlocutor in the course of interaction. Examples of my participants using this technique are displayed below.

1. Mimie	You have the idea of what it is, right?
2. Aseer	Yeah yeah.
3. Mimie	Are you searching for the name?
4. Aseer	Yeah ((scrolling his phone)).
5. Mimie	Maybe you can search for laboratory items using the Google Images.
6. Aseer	Ahaa.
7. Mimie	You can get the name and the picture together.
8. Aseer	((Silence)).
9. Mimie	Maybe you can have the idea of this thing from the picture ((showed her phone to Aseer)).
10. Aseer	Oh. Funnel.
11. Mimie	Yes yes. Thank you.

(Extract 16)

This extract was elicited from the Mimie-Aseer pairing while communicating in the object-description task. Mimie, who was given a photo of a **funnel**, like other participants started the conversation by providing descriptions about the object. However, Aseer, despite the explanations given by Mimie, could not come up with a name for the item. Perhaps trying to check her partner's understanding of the target item, Mimie then came up with a question, 'You have the idea of what it is, right?' for Aseer, as seen in line 1. Aseer, in response to the question, admitted that he knew the item and continued scrolling his phone (line 2). Mimie, once again questioned Aseer, 'Are you searching for the name?'. Mimie, as observed in the task, looking a bit impatient, spontaneously employed giving suggestions as a CS, as seen in line 5. She suggested Aseer used Google Images and looked for laboratory items there.

Other participants also spoke about giving suggestions as a CS in the interview.

'When I talk to my colleagues... usually when we talk, and I ask questions, and they don't know the answer, they will say, ask Google.' (Ayesha)

'We were in our class, and I did not understand the word used by my lecturer. I then asked my friend, Ainee, who sat in front of me. I asked, "what's the meaning of this word?". She said why don't you find it on Google.' (Irsyadi)

As depicted above, Ayesha's and Irsyadi's interlocutors suggested using Google during their communication with them. In Ayesha's case, her colleague normally suggested that she use Google whenever they could not answer any of her questions in the course of their interaction. Similarly, Irsyadi was suggested the same thing by his friend when he communicated about an unknown word during a lecture.

4.1.1(b) Interactional Strategies

4.1.1(b)(i) Appeals for Help

Appeals for help involve seeking assistance from another interlocutor during communication (Dörnyei & Scott, 1997). This strategy, as evident in the data, was another popular approach utilised by my participants in communication. They were observed to seek help amongst each other during the conducted tasks whenever difficulties arose. Furthermore, some of them even asked for my assistance despite that fact that I had informed them before the task that I was not part of their interaction. My participants also shared their experiences of using appeals for help in everyday communication with other people. Examples of the use of this strategy are as follows.

1. Tendy	It's beautiful. It's one of the wonderful birds in the world and...
2. Fiza	Does it fly?
3. Tendy	It does.
4. Fiza	It does fly? It's a bird? Is it big? <div style="text-align: right;">(Extract 18)</div>

Tendy, who was given a photo of a **flamingo**, needed to describe the bird to Fiza for her to name it correctly. During the interaction, Fiza, as seen in line 2, sought assistance from Tendy by asking about the flamingo's characteristics, '*Does it fly?*', perhaps wanting to know more about the bird they were talking about. In line 4, Fiza, was once again seeking assistance from her partner. She asked, '*It does fly? It's a bird? Is it big?*'. Although Fiza's first two questions were grammatically incorrect, the important thing was that she made the attempt to ask for help.

Apart from utilising appeals from their partners, some of them appealed to me for help during the elicitation tasks. An example is shown below.

1. Khaty	Oh my god, I don't know what the name of this thing is.
2. Bennie	A thing?

3. Khaty	Yes. An object probably used in the kitchen. We use it to transfer water or liquid.
4. Bennie	Water or liquid.
5. Khaty	Into another container ((hand gestures)) to avoid spills.
6. Bennie	((Looking at his phone on the desk)) Ha. Ya.
7. Khaty	Sometimes people use it to pour or fill in petrol into another bottle.
8. Bennie	Is it okay if I use technology?
9. I	You can do and use whatever you like to complete the task.
10. Bennie	Okay ((scrolling the phone)).

(Extract 20)

This interaction occurred between Khaty and Bennie during the object-description task. Kathy, who did not have the vocabulary of the target item (i.e., **funnel**) in L2 made the attempt to describe its functions, as shown in lines 3, 5, and 7. As observed in the task, Bennie was seen to be looking at his phone for minutes whilst simultaneously responding to his partner, as displayed in line 6. Kathy, perhaps realising that Bennie was having difficulty naming the referent then further illustrated the item, as seen in line 7. However, beyond my expectation, Bennie directly asked me whether he could use his phone in the task. I viewed his action of asking me this question as a seeking for help strategy rather than an asking for clarification or an asking for confirmation strategy, as I never mentioned in my instructions that they could use their phones in the tasks. As an observer-as-participant, I just repeated the instructions for the task, and Bennie spontaneously said ‘Okay’, started scrolling his phone, and their interaction continued.

The participants of my study also talked about using this strategy in their everyday communication. Tandy was one of them. She said,

‘Yesterday, I wanted to buy nasi goreng USA, and the seller gave me half-cooked egg with the rice. So, I was trying to tell them to make the yolk completely cooked for me. I said, can you please make the yolk well done but the person could not

understand me. I tried to describe it, but still, they don't understand me, so I had to ask someone there to tell them for me, and the seller finally got it.' (Tendy)

As shown in the excerpt, Tendy was trying to describe how the egg should be prepared for her but failed, as the seller could not comprehend her messages. Not giving up, she then asked for someone's help to tell the seller about her intended messages and finally succeeded.

4.1.1(b)(ii) Asking for Clarification

Asking for clarification, also known as a clarification request, is about requesting an explanation or repetition to clarify unclear meaning structures of the language used in interactions (Dörnyei & Scott, 1997; Jamshidnejad, 2011). For instance, a language speaker can employ phrases such as *again, please!* or *pardon* to gain clarification about unclear meanings in the language structures of the spoken language (Mariani, 2010). The participants of my study, as detected from the data, applied this strategy in communication. One of the examples of this strategy was elicited from the Meera-Jumee pairing during their interaction in the picture sequence task.

1. Meera	So... the second stage would be a tadpole.
2. Jumee	What?
3. Meera	Tadpole, but I don't have its picture.
4. Jumee	Tad?

(Extract 13)

As shown in line 1, Meera successfully named the second stage of a frog's life cycle. She said, 'so the second stage would be a tadpole'. Jumee, who maybe did not know the word tadpole, replied by asking a question 'what?', perhaps wishing for further clarification from his partner. Meera then repeated the word tadpole to Jumee while at the same time mentioning not having the photo of it. Jumee, looking confused during

the task, repeated the first syllable of the word as displayed in line 4, indicating that he still could not figure out what tadpole was and perhaps needed further clarification about it.

Besides using *'what'* as a strategy to ask for clarification, my participants also used *'why'* and came up with longer sentences such as *'Can we go there'*, as depicted in line 1, and *'What is so great about...'* (line 3) in the extract below. However, this example which is a little different to the one portrayed above, showed that my participant used asking for clarification to gain further information about a discussed topic.

1. Meera	I want us to go to Neuschwanstein Castle. Can we go there?
2. Jumeer	Oh ya, but maybe we could go to BMW Museum.
3. Meera	Why why? What is so great about BMW Museum? (Extract 24)

The dialogues above were elicited from Meera and Jumeer during their decision-making role-play task. In the task, they were required to choose one place to visit in Munich. As can be seen in the above excerpt, Meera was asking her partner, Jumeer, to follow her to Neuschwanstein Castle (line 1). However, Jumeer, looking uninterested (as observed in the task), came up with another suggestion, visiting the BMW Museum, as portrayed in line 2. Meera, perhaps feeling dissatisfied with her partner's idea then posed Jumeer a number of questions as a means to ask for clarification about the intended place, the BMW Museum. She asked, *'Why why? What is so great about BMW Museum?'* Meera perhaps employed this CS to gain information about the place (i.e., BMW Museum), whilst at the same time wanting to know the reasons that her partner chose to go there.

4.1.1(b)(iii) Asking for confirmation

Asking for confirmation, as defined by Dörnyei and Scott (1997), refers to “requesting for information that one heard or understood something correctly” (p.191). In other words, one repeats back the words that the interlocutor has said to confirm whether or not what one thinks one has heard is actually correct. My analysis of the data revealed evidence of the asking for confirmation strategy among the participants. The examples of asking for confirmation are displayed in the following two extracts.

1. Muslee	Yeah, this is very simple. This is used for drawing.
2. Aizat	Drawing?
3. Muslee	Yeah. It is used for drawing. It looks like a pen. It has different colours. Green, purple, white, yellow... it depends on what you want to draw. <p style="text-align: right;">(Extract 25)</p>

This extract was elicited from the Muslee-Aizat pairing during their object-description task. In the task, Muslee was given a photo of a **coloured pencil** for him to describe to Aizat so that he could name it correctly. As seen in line 1, he began the conversation with a simple description of the target item, perhaps hoping for Aizat to grasp the meaning of it. Aizat then employed asking for confirmation in his speaking immediately after Muslee finished describing the object. His question, ‘*Drawing?*’, in line 2, indicated that he was trying to immediately confirm whether what he heard about the target object was right or not. His communication goal, i.e., to gain confirmation about the target item, succeeded when Muslee said ‘Ya. It is used for drawing’, coupled with detailed explanations about the target item, as stated in line 3.

1. Rasaqi	Okay, I have something here. It’s lying on the floor.
2. Sahana	<i>Aaaa on the floor?</i>
3. Rasaqi	The thing is lying now on the floor. We all have it in the house. <p style="text-align: right;">(Extract 26)</p>

These dialogues were elicited from Rasaqi and Sahana during their communication in the object-description task. In the task, Rasaqi was given a photo of a **cat** for him to describe to his partner, Sahana. As can be seen above, Rasaqi mentioned the cat, which in the photo was seen lying on the floor, to his partner. Sahana, and in response to her partner's explanations repeated part of the information given by Rasaqi in question form, as can be seen in line 2. She said, '*Aaa on the floor?*'. She perhaps came up with such question as a means to confirm what she had heard was correct or not, and similar to Aizat, Sahana's strategy of confirming what she heard was successful when Rasaqi answered her question and provided a bit more information about the referent, as seen in line 3.

4.1.1(c) Indirect Strategies

4.1.1(c)(i) Use of Fillers

Fillers, as described by Dörnyei and Scott (1997) and Erten (2014), refer to discourse markers used by speakers when they think and/or hesitate during their spoken utterances. An abundance of fillers were found in my discourse data, which indicated that my participants frequently used this strategy in communication. They used both lexical and non-lexical fillers during communication.⁷ Examples of the use of this CS by my participants are displayed below.

1. Syutera	Ya. And <i>errr</i> people use it to jump or dive to the sea. It's a, it's land, and then there is no land, and there is a sea with a high land. What we call <i>errr</i> ...
2. Ozmen	It's a sun or something?

⁷ Lexical fillers refer to the use of short phrases words such as like, you know, and well, while non-lexical fillers relates to the use of non-lexemes words such as *errrm*, *uumm*, *oooo*, during interaction (Basöz & Erten, 2019)

3. Syutera	<i>Errr... you know</i> that sometimes <i>errr</i> I think the place we cannot find it in Malaysia, and you have to go outside Malaysia and here <i>errr</i> near the sea because <i>errrr</i> and... <i>errr</i> sometimes... (Extract 31)
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The above excerpt was captured from the Syutera-Ozmen pairing during their object-description task. Syutera, who had been given a photo of a **cliff**, started her explanations about it, as seen in line 1. We can see that she used the non-lexical filler ‘*err*’ twice while describing the referent. She again resorted to this CS, i.e., ‘*errr*’ five times, as shown in line 3 alongside one lexical filler ‘*you know*’. As with Syutera, other participants, Irsyadi and Annie were also found using fillers in communication.

1. Irsyadi	<i>Eerr</i> Annie, do you have free time tomorrow?
2. Annie	Tomorrow? For what?
3. Irsyadi	Maybe I can visit your house to have lunch with other friends.
4. Annie	Okay. Okay sure. Why not.
5. Irsyadi	Okay. So <i>errm</i> tomorrow <i>errmm eee chuuhh</i> lunch time 12 o'clock I will come to your <i>eer</i> house with all my friends. So, what the food that you have?
6. Annie	Okay. <i>Eerrmm</i> well I prepare some <i>eermm</i> dessert for all of you <i>eeerr</i> . I would like you to taste a Malaysian dessert <i>err</i> do you know about cendol? (Extract 33)

Irsyadi started his conversation by uttering the non-lexical filler ‘*Eerr*’ (line 1). He then once again resorted to this CS while continuing to speak about setting the time for their lunch date. As can be seen in line 5, he again uttered unlexicalised fillers, namely ‘*errmm*’, ‘*eee*’, ‘*chuuhh*’ while communicating with Annie. Similar to Irsyadi, Annie was also observed using fillers, as can be seen in line 6. She, as portrayed in the above extract, uttered non-lexical fillers three times. She said ‘*errmm*’ twice in her utterances followed by ‘*eer*’ and the same amount of ‘*errm*’ while speaking to Irsyadi.

4.1.1(d) Feigning Understanding

Feigning understanding or faking refers to “making an attempt to carry on the conversation in spite of not understanding by pretending to understand” (Dörnyei & Scott, 1997, p. 191). This strategy, as showed in my data was also used by the participants in interaction. Of all the participants, however, only two discussed using this CS in conversation, which was documented during my interview. Below are examples of the feigning understanding strategy used by participants of my study.

‘If I am talking to a foreign student, I cannot say I don’t know. I will just pretend I understand them.’ (Alip)

‘I have encountered one situation where I talked to one of my Nigerian friends. They said something, but I just said ermm ahh...ok...ok... but I don’t understand what it means... When I talk to my foreign classmates, sometimes I just pretend that I know what they say. You know, to go with the flow.’ (Vana)

These excerpts, as gained from Alip and Vana, show that they utilised feigning understanding in communication. Both specifically mentioned using this strategy when communicating with international students or classmates.

4.1.2 Digital Communication Strategies

4.1.2(a) Google Search

Google Search is a dynamic ‘corpus’ that offers access to a variety of growing and continually changing Internet resources (Kvashnina & Sumtsova, 2018). So far, Google Search is the most popular search engine with 92.26% of the market share worldwide as accessed on any kind of device - desktop, mobile, or tablet (Chris, 2021). This tool, as evident in the data seemed to be a popular CS among my participants.

Thus, I present the evidence and explanations for using Google Search as a CS by my participants in this part.

'I typed playground equipment that people use to climb... that people use to hang using Google Search.' (Annie)

Annie, during the interview, disclosed that she resorted to Google Search to name the target item, **monkey bar**, during the object-description task. Additionally, others like Hamidi, Kathy, and Eyin reported using the same CS. They said,

'Anything you just Google. You have to Google it. Just give me the question and I can google the answer on my phone.' (Hamidi)

'Ok, err.. for example, my course is Multimedia and I have to code the programme and.. it's very.. sometimes... if the lecturer hasn't touched on it in class, I Google it, and I usually find it helpful.' (Khaty)

'If we want to try a new recipe, we can get it, just Google the recipe that we want, and the recipe will show up before your eyes.' (Eyin)

Hamidi said he would be able to find solutions to any question using Google. On the other hand, Kathy used Google to explore and understand more about her subject, Multimedia, while Eyin would simply check Google to learn new recipes.

4.1.2(b) Google Translate

Google Translate, or GT, is a free online machine translation developed by Google. As Lauterbach and Bonime-Blanc (2018) stated, this tool currently supports over 100 different languages (with more on the way). It can decode multiple languages, which means users can translate texts or messages from one language into another (Bahri & Tengku Mahadi, 2016). This tool, as a digital CS, was also found to emerge from my data. The first example was gained from Alip. He said,

'I used Google translate for the lesung batu.' (Alip)

In the interview, he told me that he clicked on Google Translate on his iPad and typed the name of the target item in Malay when facing difficulties naming the target object, **pestle and mortar**, in English during the object-description task.

In addition to using this strategy face-to-face, my participants also shared their experiences of using this strategy while communicating within the online environment. For example, Eyin mentioned that she would normally opt for Google Translate whenever she encountered any unfamiliar words or phrases written by her foreign friends during the conversations in a WhatsApp group. Her statements are portrayed below.

'If I never heard the words before... you know... our foreign members usually have a lot of words that I didn't know, so I will check Google Ttranslate.' (Eyin)

Similar to Eyin, Hamidi also shared his experience using Google Translate when interacting with his Malay friends in WhatsApp. He said,

'When my friend says any Malay word, I type it into Google Translate and change it to English. One time, my friend WhatsApp me. She asks about our assignment. I type on Google Translate "I am busy doing it", I change these phrases to Malay and send it to her. She replied, "Wow, you understand Malay?" And I said very well.' (Hamidi)

4.1.2(c) Google Images

Google Images is one of Google's search services that allows Internet users to look for photos, drawings, logos, and other graphic files online (Miller, 2012). This tool works as a picture dictionary composed of millions of photos from Google Image search (Gates, 2012). As discovered from my data, this tool was also used as a CS among the

participants of my study. Examples and explanations regarding Google Images are described in this part.

'I used Google Images, I can get the picture and the meaning together. Like the avocado fruit... we have Mexican fruit in the picture... with 10 to 20 different types and then I picked one.' (Mimie)

The statement made by Mimie indicates that she was able to learn and continue giving descriptions about the fruit via the dual information offered by Google Images.

Another respondent, Sabby, also shared her experiences using Google Images during communication. She described,

'Last semester, I met my friend. She was my classmate, and she's a good friend of mine from Nigeria. So, we talked about her traditions, about her culture and my cultures and so, there's one time she asked me which state is beautiful, and then I said Malacca. I used the phone and clicked Google Images to show her this and that.' (Sabby)

The experiences regarding Google Images shared by Sabby show that she used Google Images to illustrate her explanations of the discussed topic during communication.

4.1.2(d) Global Positioning System (GPS)

Global Positioning System, or GPS, is a technology that serves “data to users based on their location...” (Klopfer & Squire, 2007, p. 213). Concerning the present study, my participants revealed that they employed GPS navigation software to locate destinations. Some talked about using this tool when travelling, while others opted for this system prior to starting their journey to the location of interest. Examples of using GPS as a CS are provided below.

'I use GPS to locate where I'm going especially when I'm in Kuala Lumpur. I, on my GPS, I try to see how many junctions, junctions number what, which side do I turn to.' (Rasaqi)

'Most of the time when we are driving, just open Google Maps. Google Maps will lead us.' (Irsyadi)

'I use Google Maps when I walk at any places in a foreign country'. (Aizat)

The extracts gained from Rasaqi, Irsyadi, and Aizat show that all chose to deploy GPS as this tool would automatically navigate them to the target location.

Other participants such as Daya and Eyin also consulted the GPS technology. However, a little different from Rasaqi, Irsyadi and Aizat, they used GPS before starting their journey. They said,

'Before I go to a new place, I just use Google Maps, using Waze.' (Daya)

'I checked our meeting point (the university hotel lobby area) using GPS on my smartphone after you informed me about the venue via WhatsApp. I did that because I didn't know this place.' (Eyin)

Both used GPS as a CS to locate the target location and obtain necessary details about it before heading to the specified location.

4.1.2(e) Online Dictionary

A dictionary is regarded as a self-learning tool, providing its users, typically language learners, with valuable information about the learned language (Chan, 2005). Previously, dictionaries have come in a form of bulky books but with today's advancement of in technology, dictionaries can be accessed online and offline. To use a dictionary online, users can simply type the intended words into any preferred Internet

search engine (e.g., Google, Yahoo, Bing). Otherwise, they can also key in the word ‘dictionary’ and type the required word to gain the required information. In the present study, the online dictionary has emerged as one of the digital CSs used by my participants.

For instance, Meera, during her interview, disclosed that she had opted to use an online dictionary in the object-description task. She said, *‘I used an online dictionary to check for a word that I don’t know just now’*. Similar to Meera, Eyin also resorted to this digital CS while communicating in the tasks. However, slightly differently to Meera, Eyin resorted to an online dictionary to check the pronunciation of certain words that she was doubtful about while engaging in the tasks. She commented, *‘I go to dictionary.com and listen to the audio pronunciation of a word that I am not sure how to pronounce during the tasks’*. Clearly, these participants were using an online dictionary for different purposes but, overall, they were actually deploying this CS for a communication-related problem, namely checking for unknown words and pronunciation.

4.1.2(f) Mobile Applications (Apps)

Mobile applications, more generally known as apps, refers to “computer programs designed to run exclusively on mobile devices” (Deng & Trainin, 2015), p.50). As highlighted by Godwin-Jones (2011), iPhone and Android mobile users can now choose any app tailored to their needs, and which can be installed, and used on their phones. As traced in the data, my participants used mobile applications as digital CS in everyday practice. Examples of them using it in communication are presented below.

'I was on an international student programme in a kampong, and we had to complete tasks in a group... erm one of my groupmates asked a mathematics question which I didn't know its answer at that time, but I am smart you know... I have a WhatsApp group called Economics, and I just posted his question, and I got the answer... and I sent the answer to him through WhatsApp... see what we can get from this phone?' (Hamidi)

'I explained about using SPSS to my friend. How to key in data using SPSS through WhatsApp. I am at my hostel, and she is at her hostel. I don't have to meet her. I take pictures, click them, send and explain how to do it step by step through WhatsApp.' (Irsyadi)

'Like me and Hasena, even though her room is opposite mine, I don't go there. I just text her through WhatsApp.' (Daya)

The participants talked about using WhatsApp as a communication strategy in everyday communication. Hamidi and Irsyadi, for instance, used WhatsApp to discuss and share a specific topic by making use of WhatsApp's affordances. As for Daya, even though she did not explicitly mention how she used WhatsApp with her friend, I believe that she, similar to these other participants, also manipulated WhatsApp features when communicating with her.

Overall, the findings of my study demonstrate that my participants employed a wide range of CSs. Specifically, they resorted to two major CSs - traditional and digital CSs - with each containing subcategories during communication. This finding is significant to my research as it suggests that my participants were not solely dependent on traditional CSs but also utilised digital CSs to aid their communication both face-to-face and online. Furthermore, such findings also suggest that combined CSs are already embedded in the participants' everyday communication, a point that is worth exploring further. Additionally, I also noticed that my participants made grammatical mistakes during communication, one of them which can be seen in 4.1.1. (b) (ii). This could be

due to the fact that they relied on an incomplete and imperfect competence of the target language, which is regarded as an interlanguage stage (Mariani, 2010). However, further explanation on interlanguage is not provided in the study as it is not part of the interest of this study.

4.2 The Findings of Research Question Two

What are the reasons behind the use of these communication strategies?

Based on my analysis of the data, five themes and six subthemes were identified as being connected with the first reason for using CS: CS factors. Meanwhile, another four themes were discovered from the data in relation to the second reason for using CS: CS functions. These themes and subthemes are displayed below.

Table 4.2 Themes and subthemes for research question two

Reasons	Themes	Subthemes
CS Factors	1. Attitude	a. Positive attitudes towards the use of CS b. Positive attitudes towards achievement strategies
	2. Culture	
	3. Familiarity with speakers	
	4. Physical context	
	5. Mobile devices properties	a. Portability and ubiquity b. Multimodality c. Immediacy b. Connectivity
CS Functions	1. Overcoming the linguistic deficiency of the spoken languages	

	2. Gaining accuracy of the content knowledge in communication 3. Giving one the confidence to create conversation and build rapport with others 4. Achieving understanding in communication	
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4.2.1 Factors

4.2.1(a) Attitude

Attitude is one of the emerging CS factors which seemed to influence the use of CSs among the participants of my study. I also discovered two kinds of findings connected to this factor. First, a majority of my participants have positive attitudes towards the use of CSs in communication. Second, they were found to prefer achievement strategies over reduction strategies in the course of their interactions, which is explained in this section.

The majority of my participants responded positively towards the use of CSs in communication, of which the following extracts are representative.

‘We can understand each other if we use communication strategies.’ (Aseer)

‘To make people understand better... it is better to use communication strategies.’ (Ainee)

‘I think it is helpful and effective. makes it easier for people who are not native English speakers to understand each other.’ (Noor)

‘We can speak and understand better using CSs.’ (Alip)

‘They are very helpful, useful, and they are helping to send the message properly.’ (Ayesha)

The comments elicited from my participants suggest that they both recognise and are aware of the importance of using CSs in communication. Collectively, they acknowledged that better understanding among interlocutors could be achieved via their use.

Besides having positive attitudes towards overall CSs usage in communication, my participants also showed positive attitudes towards specific types of CSs, namely achievement strategies in interaction. From what I could observe, these participants had a positive attitude towards CSs as they were seen to employ an extensive array of these strategies, as presented in this section. In detail, they utilised various types of achievement strategies. Among them were circumlocution, code switching, paralinguistic strategies, and appeals for help. For instance, Aizat used circumlocution to describe the target item (i.e., **Avocado**) to his partner in the object-description task as displayed below.

1. Aizat	<p><i>It's like fruit where the outside of the skin is a green colour and the inside like peanut.</i></p> <p style="text-align: right;">(Extract 49)</p>
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In addition, my participants were also found to have a positive attitude towards using mobile devices as a CS. A majority of them utilised their mobile devices as a CS in communication. For instance, one of the participants, Mimie, claimed that Google Translate is a user-friendly CS. She said, '*Google Translate, you know, it's user-friendly. User-friendly*'. Ainee commented, '*For me, I prefer to Google anything by myself. I would firstly ask for Google's help on my phone rather than straight away asking about anything to other people.*'

However, one of my participants, Muslee, talked about his negative perceptions towards technology, specifically on social media accounts and mobile apps in daily life. He commented,

'I have various social media accounts like Facebook, Twitter, Badoo, and they are my huge distraction. I used to spend a lot of time browsing and checking these accounts. I also have applications like dictionary and thesaurus on my phone, and I am addicted to them. To avoid using these excessively, I try to distance myself as much as I can from my phone. I will only use it if I feel it necessary to do so.' (Muslee)

4.2.1(b) Culture

Culture as a CS factor also emerged from the data, and it seems that this element has mainly influenced two types of the CSs used by my participants. These are paralinguistic strategy and code switching. Examples and explanations regarding the cultural influences and these CSs' usages are described in this part.

Hafiy and Hamidi, for example, have highlighted cultural influences on the use of paralinguistic strategy. Hafiy said, *'body language is part of the culture, especially the tribe I came from. All this comes from the upbringing.'* Hamidi, in agreement with Hafiy further said, *'different countries have different cultures. If you point like this (thumbs up) it means 'bagus'(good) in your country but not in Nigeria... it's an offensive sign. Stop (spreading his fingers) is like this in your country right... this right? But if you do like this in Nigeria (spreading his fingers) it means you're insulting someone.'*

The cultural notes were also noticeable in the use of code switching among my participants. Specifically, the participants were identified as switching from English to

their native language when discussing specific topics/items related to their culture, as portrayed below.

1. Fiza	What's the name of it? Haaa! We used it to make <i>belacan</i> or something. ⁸ (Extract 41)
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The code-switched word, *belacan* was articulated by Fiza in the object-description task in her attempts to determine the intended item, a **pestle and mortar**, being described by her partner, Tenny. As can be seen above, Fiza, in uttering the Malay word *belacan* might be endeavouring to highlight the usage of the pestle and mortar. The pestle and mortar, which could be acknowledged as being a culture-specific item, probably influenced Fiza to spontaneously articulate the code-switched word, *belacan*, closely related to pestle and mortar.

Another type of code switching, namely transfers of subconscious markers, which I believe happens due to cultural influences, also emerged in my data. Markers like *lah*, *ah*, *kan*, *ah*, *mah*, and *tu* are frequently used by Malaysians when speaking the target language, English. Specifically, they commonly append the English words/sentences with the particles mentioned above (e.g., *nolah*, *canlah*) (Galloway & Rose, 2015). This code switching was only applied by my Malaysian participants. Below are examples of their use of this type of code switching in their elicitation tasks.

1. Aylan	Guava... quite close. Actually, I don't really <i>knowlah</i> the precise word for this fruit, but I think it's not guava. I believe it's not guava but quite close to the answer. (Extract 44)
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1. Fareel	Yeah, yeah to content water or liquid. Owh...ahh what is that yeah... <i>Waitah</i> ... funnel!
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⁸ Belacan is a fermented condiment made from shrimps. It is known by various different names and comes in various forms. This pungent ingredient is the foundation of many Southeast Asian dishes, especially in Malaysian and Indonesian cuisines.

The extracts above showed that both Aylan and Fareel, who are Malaysian English language speakers, inserted the suffixes *lah* and *ah* during their communication with their counterparts in the elicitation tasks. However, these *lah* and *ah* particles have various meanings and functions depending on how they are used in discourse (Kuang, 2017).

4.2.1(c) Familiarity Between Speakers

Based on my observations, all thirteen pairs, who were ultimately made up of strangers, were seen to engage enthusiastically in the elicitation tasks in a similar manner to the other three pairings (Daya-Hasena, Aylan-Hafiy, and Ainee-Irsyadi) who happened to be friends. From what I observed, my participants, regardless of their degree of familiarity, looked comfortable and enjoyed speaking to one another, produced many oral productions, and even made jokes during the task. In addition, my participants, regardless of their familiarity, were seen to apply a wide variety of CSs in communication, with appeals for help being identified to be dominantly used by my participants among both familiar and unfamiliar people. However, as detected in the data, the familiarity between speakers seemed to influence the use of feigning understanding as a CS in communication.

Here is one example where my participants were found to comfortably use appeals for help when speaking to these two groups of people.

1. Daya	All these things are at the back of SAC building, I think.
2. Hasena	Hmhh. It can be used to build muscle, for abs or?
3. Daya	Yeah. Usually, children love this thing, but they have no interest to build muscle whatsoever.

4. Hasena	((Gestures))
5. Daya	What? Slides? Not slides. It is sometimes combined with slides too.
6. Hasena	Ha? What is it? Go, another clue.
7. Daya	((Scrolling her phone))

(Extract 53)

This extract was elicited from the Daya-Hasena pairing, who are friends. As shown in the extract, Hasena was seen to face difficulties naming the target object, a **monkey bar**. Trying to solve the task, she then requested help from her friend, Daya, by asking for more clues about the item (line 6). Here, Hasena was observed to comfortably use appeals for help as a strategy with her friend.

They also applied this CS with unfamiliar people in the course of interactions, as seen below.

‘There was the time I attended one workshop in Perlis. So, the presenter, he is Pakistani...I can’t understand what he said and because of that I have to ask someone. There is a lady from Bangladesh, I think she understands him, and I have to ask her “what is the speaker saying?” and she told me about it.’
(Ozmen)

As seen above, Ozmen sought help from someone he was unfamiliar with at a workshop. Specifically, he asked one of the attendees to explain the information delivered by a presenter there.

The familiarity between speakers in relation to the use of feigning understanding as a CS was shared by two of the participants in my study, Alip and Vana. For instance, during the interview Alip said, *‘if I am talking to a foreign student, I cannot say I don’t know. I will just pretend I understand them.’* In the same vein, Vana commented that she utilised the same strategy when communicating with her non-Malaysian friends. She said, *‘I have encountered one situation where I talked to one of my Nigerian friends.*

They said something, but I just said ermm ahh...ok...ok... but I don't understand what it means... When I talk to my foreign classmates, sometimes I just pretend that I know what they say. You know, to go with the flow.'

Alip, in the interview, also said, *'I don't feel embarrassed to admit about not knowing of a thing when talking to my friend'*. In agreement with Alip, Vana further commented, *'I have no problem asking my friend about anything I don't know to them. No problem. I don't need to pretend.'*

4.2.1(d) Physical context

The physical context was one of the emerging factors that appeared to affect the use of CSs among my participants⁹. Based on my observations, they utilised the available resources at the settings and comfortably used their mobile devices there to deliver their intended messages.



⁹ The physical context in the present study refers to a place and its physical resources available during interaction.

Image 4.3: Bennie and Kathy used pens, paper, and mobile devices during the elicitation task at the hotel courtyard.



Image 4.4: Meera and Jumea used pens, paper, and mobile devices during the elicitation task held at the student sitting area.

In addition, Meera, further disclosed during the interview that she used Google Images on her phone during the object-description task. She said, '*So I Google the flamingo image and then show it to him*'.

4.2.1(e) Mobile Device Properties

4.2.1(e)(i) Portability and Ubiquity

Based on my observations at the research settings, I could see that most of the participants were either seen to hold or use their mobile phones prior to engaging in the tasks. Some even casually placed their devices next to them before the task began. A

majority of them also resorted to their mobile devices in the elicitation tasks. Examples of such are illustrated below.



Image 4.5: Aylan placed his mobile phone on his lap and intermittently resorted to using it during the task held at the mini garden.



Image 4.6: Sabby and Pilly utilised their mobile devices during the task conducted at the hotel lobby. Pilly tried to sit down after taking out her phone from her bag next to their desk, as seen in the photo.

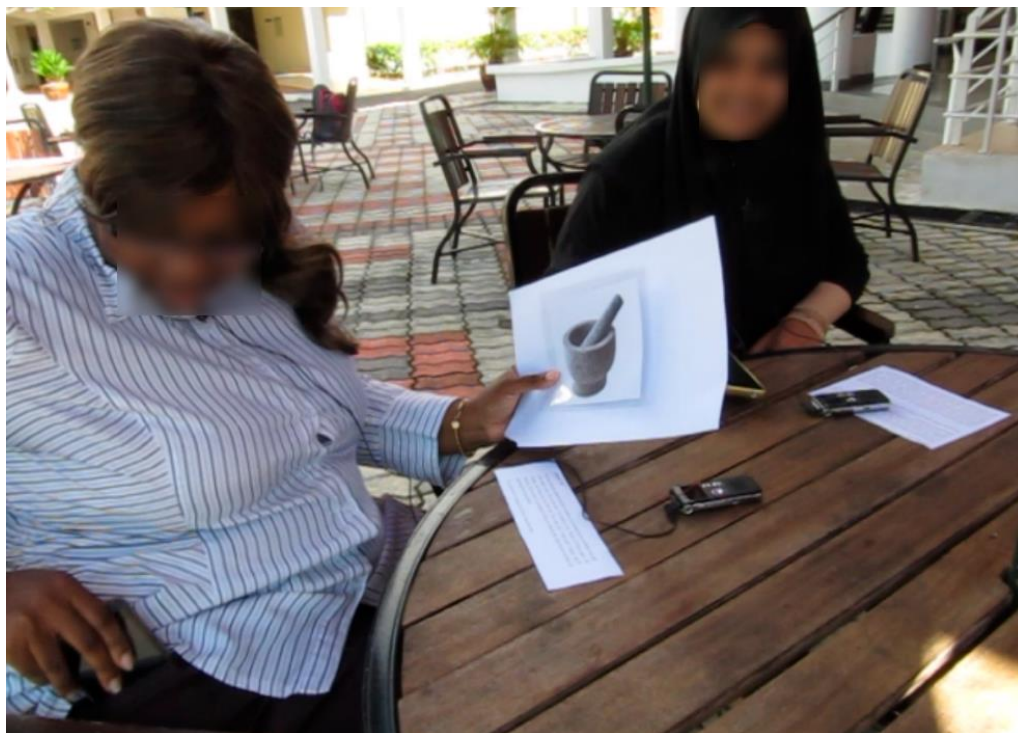


Image 4.7: Tendency was captured trying to take her mobile phone out of her trouser pocket during the task undertaken outside the restaurant.

Additionally, they also shared their experiences of bringing and deploying their devices anywhere, at any time during their everyday lives. Mimie, for instance, said,

'I travel to Thailand, but I don't know how to speak Thai... You know, I need to use their public transportation, but I don't know to speak Thai. So, I translate from English or Chinese to Thai using Google Translate. I wrote the word the bus and translated to the Thai language. I then showed this to someone nearby the translated word and mentioned the place that I wanted to go and I did it! I managed to catch the right bus and safely arrived at the destination. One more thing, I can also speak simple Thai sentences using Google Translate.' (Mimie)

'I will check my English-Malay dictionary apps if I forget any English words that I want to use during assignments. I also checked my Mandarin-English dictionary during my Mandarin class lessons.' (Sahana)

These extracts clearly portrayed the fact that my participants brought their mobile devices to and utilised them at different locations. As for Mimie, she carried her mobile phone when travelling abroad, and used it to interact with locals, whereas Sahana brought and utilised hers in and outside the classroom.

4.2.1(e)(ii) Multimodality

Multimodality is another mobile device feature that seemed to influence the use of CSs among the participants. As evident in the data, I discovered that they used various digital CSs such as Google Search, Google Images, and online dictionary in available in their phones during interaction. One such example is portrayed below.

1. Kathy	It has a big head and a long tail.
2. Bennie	It's like eer... I don't even know the name of it in Arabic. I need to be a scientist to know that name. Is it a... okay a worm?
3. Kathy	No, it's not a worm.

(Extract 40)

Following this conversation, Kathy was seen to suddenly put her phone on the table close to Bennie. She then pointed at the screen saying *'So you got this frog life cycle. You go the egg and the next stage?'*. And immediately after looking at Kathy's phone screen, Bennie named the second phase of the frog developmental stage as being *'young tadpole'*, followed by them arranging the stages of frog development based on the images displayed on the screen. As seen in line 2, Bennie did not have the word *'tadpole'* in his target language glossaries. However, he later learnt the meaning of the referent by looking at the information on Kathy's phone. It was later revealed during the interview that Kathy resorted to Google Images and searched for the images of the frog's life cycle to aid her partner to name the intended stage (i.e., tadpole). She said to me, *'I search for the frog life cycle using Google Images and show it to him'*.

Other examples in relation to multimodality are presented via these participants.

'I sometimes send some photos to my wife, my family, of the place I visited. I tell them about my activities here by sending them photos using my mobile device.'

(Rasaqi)

'Yeah. I used my mobile in my classroom. Sometimes I couldn't focus so I used it to record or take pictures because sometimes my lecturer is going too fast, and I can't follow the lesson. So, I take a picture and I also have group discussions on Facebook using my device.' (Mimie)

'You can read books on this, you can watch videos on this, you can type, you can see pictures, you can express yourself using it.' (Kathy)

These participants used multiple modalities from mobile devices in communication and language learning.

4.2.1(e)(iii) Immediacy

Immediacy is another mobile device feature that led my participants to use digital CSs in communication. Based on my observations, the participants were able to quickly complete the tasks whenever they resorted to their mobile devices. They also talked about this particular feature during the interview. Examples of such are presented below.

1. Irsyadi	Erm. You know children always climb it. The shape is like this ((gestures)).
2. Annie	Yeah ((eyes on the phone)).

3. Irsyadi	It's made of metal or iron.
4. Annie	Huh? You know what... ((eyes on the phone)) I know but I don't know the name ((kept scrolling)).
5. Irsyadi	Do you know it?
6. Annie	What what? ((both keep scrolling their phones)). Is it a climbing frame?
7. Irsyadi	Yes yes.

(Extract 38)

This extract from the interaction in the Annie-and Irsyadi pairing, which showed that Annie used Google Search to name the discussed item, **monkey bar**, provides a useful example of how a mobile device can be used to obtain needed information instantly. As shown in the extract, she named the target item a climbing frame after resorting to Google Search as a CS. Even though she did not manage to name the target item as a monkey bar, the point here is that she was able to quickly come up with a possible answer related to the referent based on her search for the target item using Google Search.

Other instances pertaining to the use of digital CSs due to the immediacy feature of mobile devices were gathered from these representatives:

'I watch movies a lot or series for example like yesterday when I was watching this movie they mention the word arsenic. I don't know what does arsenic mean so I just took my device and Googled its meaning.' (Ayesha)

With your phone, you can go to online dictionary, you just need to type the word that you don't understand its meaning, and you'll get the meaning you... maybe in just 0.016 seconds... much faster than you search using the bulky dictionary (Alip)

Ayesha and Alip used digital CSs such as Google Search and online dictionary on their mobile devices due to the immediacy feature of this tool.

Pilee, during the interview, asserted the immediacy as a useful mobile device feature. She even commented that the elicitation tasks could be performed in just 30 minutes if I told them they could use their mobile devices. She said,

Mobile devices are very useful...because it's faster to get information using your phone. Like this task, I think if you tell us that we can use phone, we can finish it within 30 minutes... (Pilee)

Overall, these participants were able to search for immediate and accurate results for the topic of interest as mobile devices support immediacy.

4.2.1(e)(iv) Connectivity

Connectivity can either be an advantage or disadvantage related to using mobile devices as one of the CSs in communication. In the case of my study, a majority of the participants gained benefits from the available wireless connection with regard to communication, as highlighted below.

'I remember chatting with a friend of mine. We were at the cafe at that time. You know... during our conversation, she suddenly mentioned a singer to me, but I didn't know him. My friend then described the singer and still I could not guess who he was! Well, I never heard of him anyway. I finally Googled the singer and ...ta-da... I found it.' (Annie)

'I was at a hotel in Thailand at that time. I needed to use an iron to iron my clothes, and I go to the receptionist and tell him I need to use an iron. He asked me back "What is an iron?" Luckily, there was a Wi-Fi connection in the lobby. So, I Googled the image of an iron and showed it to him and said, "hi...this one" and he got it.' (Daya)

'My iPad is always with me. All the time. So, when I talk to my German friend and she asks about something like the ingredients of Malaysian food, I secretly

open my iPad and search for the information. You know. I don't want to disappoint her.' (Alip)

The instances provided here showed that both Annie, Daya, and Alip have used their mobile devices in different locations and opted for Google Search and Google Images to solve their communication difficulties. Similarly, Alip also used his device, i.e., iPad, to access digital CSs or indeed any other information that might be needed in face-to-face communication.

However, the availability of a wireless connection in one place may not be helpful to language speakers if its coverage is low and undispersed. This can be seen from the following example.

'University X provides a very good Internet connection but not here. The coverage is very poor. I could not solve the tasks quickly because the Internet is so slow.' (Aylan)

In agreement with Aylan, Hafiy also highlighted that with limited or no network coverage, one would face difficulties in resorting to digital CS in face-to-face communication. He said,

'There are some places with limited or no Internet connection at all. So, when this happens you cannot check your Google Translate when you face problems while communicating with someone who doesn't speak your language.' (Hafiy)

These participants' opinions somewhat recommend that using a mobile device as a CS might not be effective if the mobile network coverage is poor.

Taken together, all the factors mentioned in this part seem to influence the use of CSs among my participants during communication. This finding is important as it laid out the potential factors that my participants and those involved in the teaching and

learning process of CS should pay attention to, so that effective CSs could be applied in communication.

4.2.2 Functions

4.2.2(a) Overcoming the linguistic deficiency of the spoken languages

Linguistic deficiency in the languages spoken was the major issue the participants faced in my study. They used a wide array of CS, e.g., circumlocution, code switching, Google Translate, and online dictionaries to overcome their linguistic difficulties in various languages. Examples pertaining to the use of each CS in overcoming the linguistics shortcomings of the spoken languages are described in this section.

Noor disclosed during the interview that he utilised circumlocution to compensate for linguistic knowledge of the TL. This can be seen in the statement below.

'In Malaysia I speak Malay... but when I travel to other countries, I can't anymore use my language. So, when I want to buy a souvenir for my family there, but I don't know its name in English, I will describe the colour, the... physical of it, err... like that.' (Noor)

Another example pertaining to using circumlocution as a lexical repair strategy in overcoming the linguistic inadequacy in the target language was obtained from Rashidi during the object-description task.

1. Rashidi	I don't even know this name in English but how could I describe this? To be honest, I don't even know the name of this animal. Ahh never mind, we'll try to describe it anyway... <i>It looks like a bird. Bird... It's flying flying. Mostly... I don't know how this one looks but this one has two kinds of colourful design, pink and white.</i> (Extract 56)
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Code switching was also consistently employed by my participants for the same reason: overcoming linguistic difficulties in the target language. One of them was Fiza, as displayed below.

1. Fiza	<i>Batu lesung (pestle and mortar).</i> Is it that?
2. Tendy	It's made out of stone.
3. Fiza	Oh my God. Arghh.
4. Tendy	It also got ya...
5. Fiza	I think it is <i>batu lesung (pestle and mortar)</i> but I don't know its name in English. (Extract 57)

In line 1, she used her native language (NL) term, *batu lesung*, to name the lexical item instead of using the target language, English. As shown in line 5, she uttered the Malay name of the target item once again before admitting to not knowing the name of the lexical item in the TL.

The participants also utilised Google Translate in tackling their linguistic problems. Khaty, for instance, said, '*If I don't understand a word, I just go to Google Translate and type that word, and Google Translate will give me the translation of it*'. Aseer, on the other hand, admitted to employing this CS to name unfamiliar items in English during the object-description task. He said, '*I take the name of the objects in Arabic or Somali, then I bring in Google, then I find the translation to English using Google Translate, actually. I used that in the object-description task.*'

Online and mobile dictionaries made up additional communication strategies utilised by the participants to bridge their linguistic gaps in a variety of languages.

Hasena shared her experiences of using these tools in everyday communication during the interview session. She said,

'During my early days here, I didn't really understand the Malay language. I remembered there were a few times when Malay people talked with me and they always say panas panas! I did not know the meaning of that word. So, one day after hearing the word again, I checked the dictionary. I used my phone and went to an online dictionary. Now I know panas means hot. They were actually complaining about the weather to me. So now every time someone said that to me I know what to reply them. I say back to them ya panas panas!'

Hasena, as shown in the quotes above finally resorted to an online dictionary to check for the Malay word *panas* (*hot*) that she had come across numerous times. Other participants, namely Vana and Aizat also turned to dictionaries to overcome their linguistic difficulties of the target languages. However, unlike Hasena, they employed dictionary apps installed on their mobile phones to cope with the linguistic challenges of everyday life. Examples are provided below.

'Sometimes I don't understand the words uttered by the actors even though the movie has subtitles. I remembered seeing the word submarine while watching one movie. I then took my phone and clicked for the dictionary apps to find the meaning of the word.' (Vana)

I have two dictionaries. One is an English-Malay dictionary. The second one is a German-English dictionary. I downloaded the second dictionary because I'm currently learning this language as a third language.' (Aizat)

The findings set out in this part show that my participants used circumlocution, code switching, Google Translate, and online and mobile dictionaries to overcome linguistic deficiencies across multiple languages.

4.2.2(b) Gaining Accuracy of the Content Knowledge in Communication

My participants were also found to gain accuracy of the content knowledge in communication but using digital CSs. They used Google Search, WhatsApp, and Google Images, as illustrated in this section.

1. Fareel	Flower. A red one. Err. National flower. Malaysia used this as a national flower. Big.
2. Ayesha	Hibiscus.
3. Fareel	No no, not hibiscus. Aaa, wait wait wait ((<i>grabbed his phone</i>)) eerrr. Is it hibiscus? She already guessed it. Hibiscus.
4. Ayesha	So that's the Malaysian national flower?
5. Fareel	Yes yes, bunga raya. Hibiscus rosa-sinensis.

(Extract 63)

The interaction began with Fareel giving descriptions of the target item, **hibiscus**. His addressee, Ayesha, without any hesitation, immediately named the referent as hibiscus. However, Fareel, looking uncertain, suddenly uttered, '*No no, not hibiscus. Aaa, wait wait wait*' at the same time taking out his phone and starting to type. However, straight after he consulted his phone, Fareel confidently said, '*Yes yes bunga raya. Hibiscus rosa-sinensis*'. During the interview, he acknowledged using Google Search to verify whether or not *bunga raya* is known as the hibiscus in English. He said, '*I searched bunga raya using Google*'.

They also used WhatsApp as a CS for the same purpose. One of them said,

'I was on an international student program in a kampong, and we had to complete tasks in a group... erm one of my groupmates asked a Mathematics question which I didn't know its answer at that time, but I am smart you know... I have a WhatsApp group called Economics, and I just posted his question, and I got the answer... and I sent the answer to him through WhatsApp... see what we can get from this phone?' (Hamidi)

Google Images was also found to achieve this particular CS function in communication. For example, Pilee said,

'My friend says, "I always see Africa is poor...bad one". I then showed the images of my city, Kartu. She said, "Whoa, Tanzania looks so nice". And I try to explain more about my country using Google Images on my mobile phone.' (Pilee)

Overall, my participants employed digital CSs, namely Google Search, WhatsApp, and Google Images, to gain accurate information on the content knowledge during communication.

4.2.2(c) Giving One the Confidence to Create and Build Rapport with Others

The participants were able to have the confidence to create conversation and build rapport with the speakers of different language backgrounds via Google Translate, both face-to-face and online.

Rasaqi, who is Nigerian and speaks Hausa as his L1, utilised Google Translate whenever he felt like creating conversations with the locals who speak Malay. He said,

'Sometimes I use Google Translate when I feel like having a conversation with our hostel cleaner. Before I leave my room, I'll insert the English sentences into Google Translate and get its meaning in Malay language. I then just greet them and say the translated sentences.' (Rasaqi)

Mimie, who speaks no Thai, also employed the same CS in interacting with the Thais. She mentioned,

'I travel to Thailand, but I don't know how to speak Thai... You know, I need to use their public transportation, but I don't know how to speak Thai. So, I translate from English or Chinese to Thai using Google Translate. I wrote the

bus and translated to the Thai language. I then showed this to someone nearby the translated word and mentioned the place that I wanted to go and I did it! I managed to catch the right bus and safely arrived at the destination. One more thing, I can also speak simple Thai sentences using Google Translate.’ (Mimie)

Others like Hamidi and Eyin, on the other hand, employed Google Translate when communicating with their friends within the online sphere. They said,

‘I translate English to Malay using Google Translate when I speak with my Malay classmates.’ (Hamidi)

‘If I never heard the words before...you know...our foreign members usually have a lot of words that I didn’t know, so I will check Google Translate when chatting on WhatsApp.’ (Eyin)

4.2.2(d) Achieving Understanding in Communication

My participants used traditional CSs, such as paralinguistics, and appeals for help, and digital CSs, such as Google Images, to achieve understanding in communication. For instance, Hasena and Mimie said,

‘Gestures helps a lot. If you don’t know about something, you can just act it out and the other person can understand it.’ (Hasena)

‘I use body language to describe about something that I don’t know to make other person understand me.’ (Mimie)

Other participants reported using appeals for help to achieve this communication function, with Aseer being one of them. He said,

‘So, if I go sometimes like to Perlis or Changlon, I... I need to use.... I have to speak Malay, not English. So, mostly I asked for my friend’s help when it comes to dealing with something important because they have been here for a while, for several years in Kedah.’ (Aseer)

This extract shows that Aseer would look for his Somalian friend who is fluent in Malay whenever he needed help to deal with important matters involving this language. By doing so, he was perhaps able to attain an understanding when communicating with the Malays.

Besides traditional CSs, my participants used digital CSs, such as Google Images, to attain understanding in communication.

'Just now (role play) I used images from Google Images to show him how cendol looks like and the ingredients needed to make it.' (Sahana)

'You can express yourself with pictures, because they say pictures... a picture tells a thousand words. You can understand something easily when you see a picture. So, what I usually do to make my friend understand me is to just Google the pictures and show them.' (Kathy)

Overall, the participants employed CSs to achieve numerous communication functions. This finding shows that my participants are amongst those of motivated language speakers who would try any means to deliver their communication intention. This is indeed significant to my study, as it suggests that language speakers would try their best to achieve their communication goals via different types of CSs.

4.2.3 The Findings of Research Question Three

My analysis of the data suggests that mobile devices did influence communication and CSs. Table 4.3, below, outlines the themes and subthemes which emerged from my data.

Table 4.3 Themes and subthemes for research question three

Themes	Subthemes
1. Multimodal communication strategies (MCSs)	
2. Autonomous communicator	(a) Silence in interaction
3. Collaboration	(a) Working together across locations (b) Fostering communication between speakers

4.2.3(a) Multimodal Communication Strategies (MCSs)

The majority of my participants employed multimodal CSs during their interactions. They specifically utilised traditional CSs in conjunction with the digital CSs offered by their mobile devices during communication, leading to communication success. Some examples of such are shown via these representatives.

‘Last year, I bought a motorbike from a Malay guy who could not speak English at all. Since he can’t speak English, I talked to him using some Malay words that I know. But you know... it was not enough. So, I used the translation app on my phone to communicate with him. I translated Arabic words to Malay. I also called a friend of mine using my phone and asked him to talk to her.’
(Bennie)

‘...One day I was explaining about television (TV) to my mentees, I told them that TVs in the 1960s-70s were as big as this window; you cannot carry them like your mobile phones. They looked surprised and confused when I explained about the old TVs. I then Googled the images of the TV using my cell phone and showed them to them. Once my mentees looked at the photos, they said... “Oh, so this is what TVs in the 1960s looked like”.’ (Rasaqi)

As depicted in the extracts, both Bennie and Rasaqi utilised multimodal CSs and achieved their communication goals.

4.2.3(b) Autonomous Communicator

The participants of my study were found to autonomously utilise their mobile devices throughout the elicitation tasks. Without being instructed to do so, they spontaneously grabbed their mobile devices once they needed to seek information whenever they faced difficulties in communication. The following excerpts are examples of such.

'I remember chatting with a friend of mine. We were at the cafe at that time. You know... during our conversation, she suddenly mentioned a singer to me, but I didn't know him. My friend then described the singer and still I could not guess who he was! Well, I never heard of him anyway. I finally Googled the singer and ...ta-da... I found it.' (Annie)

'We went to the stadium. On getting to the field, he said, "Don't touch the pitch". P-I-T-C-H. No 'D'. Then I said, "What do you mean? The stadium is it?" The guy said, "Ya, stadium, it's the stadium". I know that the whole place is the stadium, including the pitch is called the stadium. I want to be sure of myself, and I typed 'pitch' into my phone. And my phone showed me the field where people play football. It's called the pitch...' (Hamidi)

As seen above, Annie turned to her phone in the middle of her conversation with a friend of hers at a cafe. She sought Google on her phone to search for the singer she had never heard of. Hamidi autonomously resorted to his cellphone to seek clarification about an unfamiliar word, pitch, while communicating with his friend at the stadium.

4.2.1(b)(i) Silence in Interactions

Most of my participants kept silent whenever they autonomously resorted to their mobile devices as a CS in interactions conducted in natural settings. Examples of such are provided below.

1. Syutera	You know the name? I know the name of this thing but in Malay. <i>((eyes on the phone and continued scrolling))</i>
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2. Ozmen	I don't even know the name of it in my language, so I have to Google it. <i>((using his phone))</i>
3. Syutera	Oh ok <i>((silence))</i> .
4. Ozmen	I know the first stage, but this one...
5. Syutera	But you have seen it before, right?
6. Ozmen	I have seen it even in my secondary school. We learnt something like this. Metamorphosis <i>((scrolling his phone))</i> .
7. Syutera	You can Google it.
8. Ozmen	<i>((Silence)) ((eyes on the phone))</i> (Extract 72)

Both Syutera and Ozmen kept silent when they started referring to their mobile devices independently. Specifically, I found that they were so focused on their phones that no interaction occurred as both were busy scrolling on their devices, presumably searching for an answer to the difficulty faced in the task. Similar to Syutera and Ozmen, other participants, namely Mimie and Aseer, also exhibited the same kind of behaviour; that is, they became silent once they started using their mobile devices as a CS in face-to-face interaction. This can be seen in the extract below.

1. Mimie	This can be used as a decoration in our house. You can put flowers inside that thing.
2. Aseer	Put flowers inside that thing?
3. Mimie	Yes.
4. Aseer	<i>((silence))</i>
5. Mimie	<i>((silence))</i>
6. Mimie	Do you know the name of this thing in your language?
7. Aseer	Err...flower holder?
8. Mimie	Sorry?
9. Aseer	Flower holder?
10. Mimie	Oh, flower holder, but it has a name. Maybe you can use Google Translate. (Extract 74)

Mimie was supposed to describe the target item, **vase**, to Aseer in the object-description task. As seen in line 1, she did indeed begin the conversation by describing

it to him. Aseer, in response, came up with a question, as can be seen in line 2, perhaps trying to ask for confirmation from Mimie about the function of the target item. Mimie said ‘Yes’, and Aseer, based on my observation, autonomously resorted to his phone and started looking at it without saying anything further. Mimie, instead of explaining more about the object to Aseer, was seen to pick up her phone that she had placed on the table and start tapping the screen. No interaction occurred when both were looking at their phones.

4.2.3(c) Collaboration

As yielded by my data, the participants performed collaboration in communication. They reported collaborating across locations via mobile devices with other people to solve the topics they were discussing, fostering communication between them.

4.2.1(c)(i) Working Together across Locations

My participants manipulated mobile devices’ affordances to share, discuss, and exchange information and opinions with people across locations. The first example of such is given below.

‘I wanted to prepare different dishes for my friends, but I don’t know how to prepare them. I tried to call my mother. Video call. She started demonstrating it for me, telling me the ingredients. At that time, my friends did not know I was conversing with my mother, and I prepared the dishes following her instructions during the video call. And I did it very fine. And you know what, my friends praised me. They said my cooking was good, but they did not realise I was actually on a video call with my mother to prepare the dishes. I was able to do that successfully because I have my phone.’ (Hamidi)

As shown in the above quote, Hamidi shared his experience of using a video call application on his mobile phone with his mother. They could communicate and work together virtually as his mother assisted him in preparing dishes for his friends by giving instructions via that video call. Hamidi was able to cook the dishes by just following his mother's instructions online. From this, it was evident that they could work together to solve a task, despite being in different locations, via a video call application on his mobile phone. Another example pertaining to working together across locations was obtained from Irsyadi.

'I explained about using SPSS to my friend. How to key in data using SPSS through WhatsApp. I am at my hostel, and she is at her hostel. I don't have to meet her. I take pictures, click them, send and explain how to do it step by step through WhatsApp.' (Irsyadi)

Irsyadi, as revealed above, was able to share and discuss the steps to key data into SPSS on WhatsApp with his friend. Specifically, he manipulated the features of WhatsApp to aid his explanations about using the software. Interestingly, despite being in different settings, they were able to work together and successfully complete this task via their mobile phones.

Another participant, Meera, also revealed using the same CS while completing the object-description task. She said,

'I asked my friend about the funnel since I didn't know the name of that thing. I asked my friend through WhatsApp... er... the name of it.' (Meera)

In the interview, Meera admitted using her phone by texting her friend on WhatsApp, asking for help in naming the target item during the object-description task. By doing so, she was able to pinpoint the referent as a **funnel** successfully. This kind of collaboration is a somewhat unique compared to the above examples gained from

Hamidi and Irsyadi. This is because Meera performed collaboration in two different environments and locations. Specifically, she worked together with her partner face-to-face in completing the elicitation tasks whilst at the same time asking for help from her friend, who was at a different location, online.

4.2.1(c)(ii) Fostering Communication between Speakers

I noticed that the spontaneous use of mobile devices among the participants of my study fostered increased interaction between them. They were observed to yield more information and ideas regarding the topic being discussed when they intermittently referred to their mobile devices as a CS in the course of the interaction. They also managed to talk more and naturally keep their conversation flowing when they contributed information gained from their mobile devices on the topic being discussed. Examples pertaining to this theme is displayed below.

1. Fiza	You can see castles everywhere, but we only have this BMW Museum in one place. You know, you should think about it. The architecture of this building is very nice with people's favourite cars inside it ((eyes on phone with thumbs scrolling the phone)). BMW is the favourite car of yours, right?
2. Tendy	Of course, but you know what, this castle it has...
3. Fiza	There is nothing there; it's just the scenery. Here we can look at many cars.
4. Tendy	No. No, you know what, this castle has been featured in many movies, and it also has inspired the Walt Disney Castle you know, and so if you go inside, you will see so many things like the rooms and they are beautiful, and you can see much of the history you know of the king in Germany.
5. Fiza	The castle's design and architecture are nothing compared to the BMW Museum. We should go there. We should go to this place as it has marvellous and modern interior design ((eyes on phone)). We can also see the evolution of the cars from the oldest to the newest one ((eyes on phone)).
6. Tendy	Wait aaa... ((eyes on phone)) but we can just only see the cars if we go there. I really want to visit the castle.

These two participants were communicating in the role play task entitled Holiday in Munich where both needed to agree on one place to visit on their last day there. In the task, Tendy was given a photo of Neuschwanstein castle while her partner, Fiza, had a photo of the BMW Museum. Throughout the task, both were negotiating and persuading each other to visit the places assigned to them. And, as can be seen in line 1, Fiza, started the conversation by mentioning that the BMW museum has nice architecture. Tendy, in response to Fiza, provided facts about and a thorough description of the castle, as seen in line 5. Fiza, upon hearing Tendy's explanations about the castle, then once again emphasised the design of the museum, while at the same time adding new information about the BMW cars there, as seen in line 5. Overall, I could see that both participants were able to share and construct knowledge about these two places via the use of a mobile device as a CS. Besides, they were also seen to actively engage in communication via the utilisation of mobile devices as a CS. Similar to this pairing, Sabby and Pilee also communicated a lot when a mobile device was utilised as a CS in interaction, as can be seen below.

1. Sabby	So, how's the food?
2. Pilee	It's nice.
3. Sabby	How's the dessert that you've just tasted?
4. Pilee	It tastes good but I don't know how to prepare it.
5. Sabby	How to prepare the food? Well, this is actually Malaysian traditional food.
6. Pilee	Malaysian traditional food?
7. Sabby	Ya, it's Malaysian traditional food which we call cendol. It's sweet right? It is cold right?
8. Pilee	It seems suitable for children, the older people and everyone can eat it.
9. Sabby	Yeah, yeah everyone can eat it yeah because we use like a lot of actually a lot of natural....green bean flour, we use tapioca flour, salt, <i>pandan</i> leaves. You know <i>pandan</i> leaves? ((looks at phone))

10. Pilee	No.
11. Sabby	<i>Pandan</i> leaves, we use it like like we use it like... brings out the aroma, makes it tastier and adds colours to the cendol. The cendol is green.
12. Pilee	It must be famous and healthy and served in every restaurant.
13. Sabby	Yes, yes, it is famous among Malays but not everyone knows how to make cendol.
14. Pilee	It must be difficult to prepare it.
15. Sabby	It's quite tricky to prepare it because we need to do this, to do that. We use coconut milk. We have three stages of making <i>cendol</i> ((looks at phone)). This is my first time making <i>cendol</i> .
16. Pilee	Ohhh... So, this is the first time? You don't have any experience preparing it? ((laughs))
17. Sabby	I made cendol because of you. ((scrolling her phone))
18. Pilee	For me, it's the first time to see it but I like it. Can I prepare this in my country?
19. Sabby	Yeah, yeah you can prepare this in your country. Yes. You need to use coconut milk, red sugar we call it <i>Melaka</i> sugar and also <i>Pandan</i> leaves to make it smell nice.
20. Pilee	Okay coconut milk. No <i>pandan</i> leaves no problem?
21. Sabby	You don't have to use it if you don't have it. <i>Pandan</i> only gives the colour. First you need green bean flour, tapioca flour, and rice flour. You need to cook for 15-30 minutes. But you need to prepare it separately. Three stages. The final one is putting the coconut milk on top of it. The first one is you need to prepare the green one. The <i>cendol</i> . ((looking at phone))

(Extract 75)

This lengthy extract was elicited from the Sabby-Pilee pairing during the role play task. During this task, Sabby was required to explain how to make a traditional Malaysian dessert, **cendol**, to her partner, Pilee. As evident in line 15, Sabby admitted that she had no experience of preparing this dessert. Therefore, it was not a surprise to see her intermittently referring to her phone while explaining about the ingredients of **cendol**, and the steps to make it, to her partner. From what I could observe, the use of a mobile device as a CS by Sabby fostered increased interaction between them. This can be seen from the extract where Pilee seemed to be interested to know more about the **cendol** (as seen in lines 18 and 19) each time Sabby shared more of the information

about this dessert gained from her mobile device. In general, I consider that Sabby, despite not having proper knowledge about **cendol**, was able to smoothly deliver the steps to prepare it via by utilising a mobile device as a CS, which consequently increased their communication and collaboration.

Overall, the use of a mobile device as a CS seemed to affect my participants' interactions. This finding is significant as it shows that a mobile device, when used as a CS, may enhance communication in general though it does seem to come with less desirable effects like silence in interactions, and which should be studied in future research.

4.3 Chapter Summary

This chapter presented the findings of this research. The first research question and its subquestions revealed that my participants used a wide variety of CSs, namely traditional and digital CSs, in communication. The second research question showed that my participants used both traditional and digital CSs for various reasons. These reasons consisted of the different factors and functions of CSs are detailed in this chapter. Finally, the third research question revealed that there were effects related to the use of mobile devices as CSs in communication, as has also been explained in this chapter.

The following chapter is the discussion of the above findings.

CHAPTER 5

DISCUSSION

This chapter discusses the findings of the present study to answer all three research questions. The findings presented in the form of themes are analysed, linked with the relevant literature and underpinning theories, and interpreted based on my judgement as a researcher.

5.1 Research Question One

1. Do the participants employ communication strategies in interactions?

a) What are the examples of strategies being employed in interactions?

b) Are mobile devices being employed in communication strategies?

c) Which mobile devices applications are being used to interact?

My participants resorted to two major types of CSs, namely traditional and digital according to the Multimodal CS Taxonomy described in section 2.5.6. The present findings, which depicted traditional CSs in communication by my participants corroborates the results of other CS studies (e.g., Manzano, 2018; Rofiatun, et al., 2018; Uztosun & Erten, 2014). In my opinion, the use of traditional CSs among my participants suggests that they were perhaps already familiar with this type of CS and thus already using it in their own language, making them prone to use it in the target language, English. Another possible reason was that perhaps the participants might find this type of CS convenient to use in communication, which further suggests this type of CS to be an essential strategy for all language speakers. As seen in the previous chapter, they employed circumlocution, code switching, paralinguistics, giving suggestions, appeals for help, asking for clarification, asking for confirmation, use of fillers, and

feigning understanding, all of which I categorised as traditional CSs. All the traditional CSs used by my participants are those mentioned in the Dörnyei and Scott (1997) taxonomy except for one strategy, giving suggestions, which emerged from the data.

From the findings, the participants extensively employed circumlocution as a CS, similar to previous studies (Abunawas, 2012; Al Alawi, 2016). One of them was elicited from my participant, Vana who disclosed using circumlocution when communicating with her friends. She said, '*...Oh ya, when speaking to my friends, I describe what the thing is, which for me is very helpful*'. A possible explanation for the extensive use of circumlocution among my participants is because they were proficient speakers of English, and, as noted by Al Alawi (2016), intermediate and advanced English language speakers are highly dependent on circumlocution in communication. The use of circumlocution among my participants was anticipated as this CS, as highlighted by Dörnyei (1995), is the most important strategy in communication.

Other CSs, code switching, and paralinguistics were also found to be utilised by my participants. As for code switching, two of my participants revealed using this type of CS in communication. They said,

'I alternate between the Swahili language and English when speaking with my family and friends.' (Pilee)

'I code switch when I speak English with my friends.' (Fareel)

The actions of my participants, in that they frequently used code switching in interaction, were also observed in many of the previous studies into CS (Awang, et al., 2015; Hua, et al., 2012; Rofiatun, et al., 2018). Similar to circumlocution, code switching was also expected to occur in my data as this strategy is commonly practised among bilingual and multilingual speakers, which happened to be the case for all my

participants, during communication (Schmidt, 2015). Regarding paralinguistics, my participants utilised such strategy together with verbal CS, similar to Abunawas (2012) and Uztosun and Erten (2014). This can be seen in the example below.

1. Aizat	What do we call that?
2. Muslee	Big head (<i>pointed at his head using the index finger</i>). Tail (<i>using the same finger to illustrate the tail of the object</i>). It looks like, and it looks like spermatozoa (<i>making hand movements to portray spermatozoa</i>). (Extract 8)

In addition, they also resorted to objects available at the settings, which I found interesting with regard to the present study (see Image 4.1 and 4.2). To my knowledge, no CS researchers to date have described the utilisation of objects as CS in the research setting by their participants. This has perhaps happened because CS studies are normally carried out in a contrived setting to minimise or avoid any external interferences (e.g., Haastrup & Phillipson, 1983; Wongsawang, 2001). I assume that the contrived research setting is only occupied by necessary items related to the research study, which thus potentially prevents the language speakers from applying their natural CS during communication.

Appeals for help, asking for clarification, and asking for confirmation were also repeatedly used by my participants. As for appeals for help as a CS (see 4.1.1 (b)), the use of this strategy reflects those of Malasit and Sorobol (2013), Uгла, et al. (2013a) and Nurliana (2020), whose participants also used this strategy as a CS in communication. I assume that this CS was popular among my participants because they think that asking for help from others is a quick and effective solution, compared to trying to solve the communicative difficulties on their own. Another possible reason for my participants using this CS is that they were perhaps accustomed to utilising this strategy with interlocutors in their first language. For this reason, they may naturally

tend to apply this CS when communicating in the target language. By contrast, in terms of asking for clarification as a CS (see 4.1.1 (b) (ii)) , my study's finding seem to be consistent with those of Kongsom (2016) and Baradeyah and Farrah (2017), which showed that asking for clarification was employed by their EFL participants in communication. One possible reason for the use of this strategy among my participants was that they perhaps wanted to initiate more L2 output from their interlocutors to achieve an understanding of the discussed topic. I also noticed that asking for clarification had somehow encouraged my participants to employ different "wh" questions when they asked for clarification from their interlocutors. The use of "wh" questions is beneficial as it helps language learners to generate and expand their ideas during communication (Hsiao, 2017).

As for asking for confirmation amongst my participants (see 4.1.1 b (iii)), this finding is consistent with that of Thu and Thu (2016), Malasit and Sorobol (2013) and Uгла, et al. (2013a), who found that their participants resorted to this strategy as a CS in interaction. In my opinion, the participants in my study were confident in the use of this CS during communication, which indicated that they were risk takers. This is because they, without hesitation, were able to achieve their communicative goals by courageously applying asking for confirmation as a CS with their interlocutor. Overall, the use of appeals for help, asking for clarification, and asking for confirmation as CSs among my participants indicate that they were confident language speakers, as using these CSs required them to have the courage to query and elicit information from other speakers.

As for fillers and feigning understanding, my participants made extensive use of the first, echoing previous CS studies conducted among EFL language learners

(Hardianti, 2016; Nakatani, et al., 2012; Uгла, et al., 2019). One of the examples of fillers used by my participant in communication is displayed below.

4. Syutera	Ya. And <i>errr</i> people use it to jump or dive to the sea. It's a, it's land, and then there is no land, and there is a sea with a high land. What we call <i>errr</i> ...
5. Ozmen	It's a sun or something?
6. Syutera	<i>Errr... you know</i> that sometimes <i>errr</i> I think the place we cannot find it in Malaysia, and you have to go outside Malaysia and here <i>errr</i> near the sea because <i>errrr</i> and... <i>errr</i> sometimes... (Extract 31)

In my opinion, fillers, either in the form of short words or phrases, or made of non-lexemes words (Erten 2014), are easy to remember, making them easy to apply by language speakers, including my participants in interactions. They may have already familiar with fillers and use them frequently in L1 and are therefore likely to use them in the target language naturally. The latter, namely feigning understanding, was highlighted by only two participants, with both noting that it was used when communicating with international students or classmates. These participants said,

'If I am talking to a foreign student, I cannot say I don't know. I will just pretend I understand them.' (Alip)

'I have encountered one situation where I talked to one of my Nigerian friends. They said something, but I just said ermm ahh...ok...ok... but I don't understand what it means... When I talk to my foreign classmates, sometimes I just pretend that I know what they say. You know, to go with the flow.' (Vana)

The infrequent use of this CS among them maybe not because they barely used it in communication, but rather that it is difficult to detect the presence of feigning understanding in the spoken data as this strategy is meant to be used covertly by a speaker in communication (Hung, 2012). However, Hung (2012) argued that an interview is an effective way to obtain this CS in communication. His recommendation,

in my opinion, is reasonable, as this CS was indeed detected during my interview with the participants.

The final traditional CS, yet the key contribution of this study, is giving suggestions as a CS. Presumably, none of the key taxonomies has included giving suggestions as a kind of CS strategy, making its emphasis worthwhile in the current study. In my opinion, giving suggestions as a CS emerged due to the portability and mobility of mobile devices, meaning that my participants came up with this CS because they knew that each of them would have their mobile devices with them wherever they went, and thus searching for information on their phone on the spot would have been possible for everyone. The emergence of this CS in my data also indicates that suggesting the use of Google on the mobile phone may help them obtain quick and accurate answers to any questions that arose during communication.

Regarding digital CS, very little research has mentioned using some of the digital CSs that emerged from my data, with the exception of just a few studies (Hung & Higgins, 2016; Omar, et al., 2012; Suraprajit, 2017), making the digital CSs found in this study significant for CS research studies. As stated in section 4.1.2, my participants used Google Search, Google Translate, Google Images, Global Positioning System (GPS), online dictionary, and mobile applications (apps).

Based on the literature, the use of Google Search as a CS is rare in any CSs studies (Omar, et al., 2012). However, my review of the CS literature found a single study by Hung and Higgins (2016) that mentioned the use of Google Search in communication. Unlike my study, whose participants used Google Search in the face-to-face communication (see 4.1.2 (a)), the participants of Hung and Higgins's (2016) study resorted to this digital CS while communicating in the text-based synchronous

computer-mediated communication context. However, they did not provide any detail how their participants utilised Google Search as a CS in interactions. Unlike these researchers, I have sought to offer detailed explanations with regard to using Google Search as a CS in communication, which may be beneficial in the area of CS studies. I assume that my participants like using Google search as a CS as it offers its users highly accurate results about the subject of their search on the Internet (Chris, 2021) and continues to be the most commonly used compared to other search engines due to its higher search results' quality (Shaw, 2020). For these reasons it is not surprising to know that Google, as a search engine, is now of interest to language learners, teachers, and researchers (Han & Shin, 2017).

Similar to Google Search, the use of Google Translate (GT) in the area of CSs is also rarely found in the literature. However, one study by Omar, et al. (2012) mentioned the presence of this CS in their study. Omar and her fellow researchers discovered that their participants resorted to Google Translate as a CS when facing language difficulties during online discussions on Facebook. Consistent with Omar, et al. (2012) my participants also used GT to overcome problems linked to language usage. One of the examples of my participants using GT was elicited from Eyin. She said, *'If I never heard the words before... you know... our foreign members usually have a lot of words that I didn't know, so I will check Google Ttranslate'*. However, there was a slight difference between my study and that of Omar, et al. (2012) as their study only reported the use of GT in an online environment, whereas mine thoroughly discussed the use of this CS in both face-to-face and online situations. I anticipate that my participants preferred using this strategy in communication because, first, they can obtain the intended word quickly thanks to the free and easy access to GT on portable mobile devices and, second, using Google Translate allowed them to better understand

a given word or subject of interest in a familiar language (Bahri & Tengku Mahadi, 2016).

Regarding Google Images, this type of CSs is also rarely found in the literature on CS studies, with the exception of one study by Hung and Higgins (2016), as mentioned previously. As outlined in the findings chapter, my study found that my participants relied on Google Images in their communication, Sabby being one of them. She described,

'Last semester, I met my friend. She was my classmate, and she's a good friend of mine from Nigeria. So, we talked about her traditions, about her culture and my cultures and so, there's one time she asked me which state is beautiful, and then I said Malacca. I used the phone and clicked Google Images to show her this and that.' (Sabby)

This type of strategy, in my opinion, not only provided my participants with a wealth of information but at the same time allowed them to independently find textual and graphical information in a matter of seconds based on the relevant keywords they generated (Mutta, et al., 2014). The participants also seemed to opt for GPS as an assistive technology, and undeniably this digital CS is useful to language speakers with regard to locating their destinations before and while on the go. The instances of them using GPS as a CS are presented below.

'Before I go to a new place, I just use Google Maps, using Waze.' (Daya)

'I checked our meeting point (the university hotel lobby area) using GPS on my smartphone after you informed me about the venue via WhatsApp. I did that because I didn't know this place.' (Eyin)

The present finding, which has demonstrated GPS to be a helpful application for my participants, is consistent with the studies of Vorderer, et al. (2016) and Jih-

Hsuan (2019), who reported that GPS was one of the more important mobile phone tools used by university students. Other research studies by Edmonds and Smith (2017), Freiermuth (2015), and Sun, et al. (2015) also supported the present finding. They found their participants were able to identify the locations specified for the context-aware ubiquitous learning using the capabilities of GPS, and thus successfully completing their language learning activity. In my opinion, GPS's accessibility has empowered my participants to independently solve problems such as finding the right directions to a target location (Squire & Dikkers, 2012). They also enjoyed using online dictionaries and mobile applications like WhatsApp as a CS in communication.

Pertaining to online dictionaries as a CS, no CSs studies except for those by Hung and Higgins (2016) and Omar, et al. (2012) have specifically mentioned the use of the online dictionary as a CS in interaction. In their research findings, they revealed that participants consulted online dictionaries during online communication to overcome their language-related problems. Consistent with Hung and Higgins (2016) and Omar, et al. (2012), the present study's findings also revealed that my participants resorted to this strategy for communication and language-learning purposes. However, a little different from theirs, my participants also used this digital CS face-to-face, which is quite similar to Suraprajit's (2017) participants who also utilised dictionaries on their mobile phones while speaking to their interlocutors face-to-face. Those are the examples of my participants using online dictionaries for language learning purposes and face-to-face communication.

'I have two dictionaries. One is an English-Malay dictionary. The second one is a German-English dictionary. I downloaded the second dictionary because I'm currently learning this language as a third language.' (Aizat)

'I go to dictionary.com and listen to the audio pronunciation of a word that I am not sure how to pronounce during the tasks.' (Eyin)

I anticipate that my participants used this tool in communication because it is free and one click away, which may make them habitually inclined to search for new words using this digital CS over other tools. The finding may also be explained by the fact that the online dictionary is an essential tool among multilinguals, which happened to be the participants of my study. Finally, my participants also utilised apps as a CS in communication, with WhatsApp being one such. My participants were identified to have used this app as a means to communicate and co-construct knowledge about a topic of interest by manipulating the affordances of WhatsApp on their mobile devices. This means using apps as a CS may facilitate their communication (Hamad, 2017).

Overall, the findings pertaining to digital CSs seems important to my study because it signifies that my participants prefer using digital CSs via their mobile phones rather than communicating with other people for help. In my opinion, their action of resorting to digital CSs over any traditional CS (i.e., asking for other people's help) did not indicate they were reluctant or unable to form a linguistic plan, but were rather trying to make use of the best means available to them in communication. Perhaps a significant point is that the use of digital CSs among my participants suggests that this CS may reduce language speakers' verbal production as they only have to communicate with a machine, which requires no such production, but which may not be a favourable approach for language learners. However, on one side, mobile devices' accessibility and feasibility empowered my participants to solve problems independently. I also saw that the use of a digital CS might actually increase language speakers' verbal productions if used appropriately. As evidenced in the literature (see section 2.8.3 (a) (iii)), participants communicated among themselves and collaboratively used the GPS's

capabilities to solve their tasks (e.g., Edmonds & Smith, 2017; Freiermuth, 2015; Sun, et al., 2015). Thus, I recommend that language learners should be exposed to effective ways of utilising digital CSs' capabilities to enhance their oral communication in their learned languages. The reason for this is that it is impossible to stop language speakers from using digital CSs via their mobile devices since this tool has become an integral part of daily life. Overall, the use of digital CSs among my participants is a significant finding as it suggests that asking for other people's help is no longer the primary option adopted by language learners. Hopefully, the present finding gathered from my participants may help us to understand the use of digital CSs in the area of communication strategies.

From the findings, the participants' use of CS partially aligns with the strategic competence by Canale (1983) opted for my study. In terms of similarity, my participants resorted to using verbal and non-verbal CSs, which is consistent with the types of CSs proposed by Canale (1983) in his strategic competence concept. However, the emergence of the digital CSs as a type of CS among the participants makes my findings somewhat distant from Canale's (1983) strategic competence, which does not include digital CS. For this reason, I therefore recommend that future researchers integrate the concept of multimodality with that of strategic competence so that the additional type of CS (digital CSs), which are now used as a means in communication, can be explained in depth.

5.2 Research Question Two

2. What are the reasons behind the use of these communication strategies?

The reasons for CS usage in association with CS factors and CS functions in communication by the participants will be discussed in this section.

5.2.1 CS Factors

The findings of my study suggested the emergence of factors of CS, with some being unique, such as digital CS as achievement strategies, physical context, and mobile devices properties as CS factors. These CS factors, to my knowledge, have not specifically been reviewed in any previous CS paper, thus contributing to the CS literature.

I discovered that my participants have positive attitudes towards the overall usage of communication strategies, which is quite similar to the findings of Rastegar, et al. (2016), Toomnan and Intaraprasert (2015), and Malasit and Sorobol (2013). Their studies revealed that language learners who had a positive attitude towards English language learning and speaking used more CSs than those who did not. However, my participants, slightly differently to theirs have a positive attitude towards the use of CS in communication and, as seen in section 4.2.1 (a), they conceded the usefulness of CSs as a communication tool when speaking with interlocutors. My participants' positive attitudes towards CSs also explains the occurrence of a wide variety of CSs across the data, as presented previously. Hence, this finding suggests that not only speakers with positive attitude towards English language learning and speaking may produce many CSs in communication, but also those with the same attitude towards CSs themselves may also utilise many such strategies for this purpose.

In addition, the actions of my participants in favouring achievement strategies over reduction strategies is consistent with the findings of Dong and Fang-Peng (2010)

and Hussin and Devi (2015), who revealed that their participants had a positive attitude towards achievement strategies. The possible explanations for my participants' preferred use of achievement communication strategies are that they were, first, motivated language learners who, despite the associated struggles, chose to communicate using the target language via achievement strategies; and second, they were aware that using achievement strategies could keep their conversation going. As seen in section 4.2.1 (a) (i), they also resorted to digital CSs which, in my opinion, links with the concept of achievement strategies proposed by CSs researchers (e.g., Dörnyei & Scott, 1997; Faerch & Kasper, 1983). This is because digital CSs were also used as an alternative plan by my participants to attain their communicative goals. However, to my knowledge, no CS studies have included digital CSs as one of the achievement strategies. Thus, this finding, namely that discovering digital CSs could be part of their achievement strategies, contributes to the CS literature. However, digital CSs, unlike the typical achievement strategies mentioned in the literature, are unique as they are derived from mobile devices, and thus this finding again contributes to the CS literature. Interestingly, I also discovered that one participant with a negative perception of technology did not utilise any digital CS in the spoken tasks, suggesting that those with a negative attitude towards technology might not favour the use of digital CSs in communication. However, further research may be needed to properly understand the effect of attitude on digital CSs.

Meanwhile, as pertaining to culture, two types of CSs, namely paralinguistic and code switching, were highly influenced by this element. As seen in section 4.2.1 (b) (i), the participants mentioned using paralinguistics in communication, suggesting that they might come from a cultural background that practices various paralinguistics in communication (Ghout-Khenoune, 2012). They also practised code switching to their

first language in conveying culture-specific concepts/items or topics in conversations. However, this is an inevitable practice as Wongsawang (2001) and Passe (2013) argued that the English translation of the culture-bound words could not convey the exact meaning of what the items actually were. The occurrence of one type of code switching, i.e., the use of a subconscious marker (e.g., *lah*, *ah*) in communication as a CS among my Malaysian participants also suggests that cultural variation may create a unique type of CS. However, to develop a full picture of this type of CS, additional studies may be required in the future. Overall, I anticipate that cultural background affects strategy choice (Hsieh, 2014, p. 10).

As I described previously, my participants showed positive attributes (e.g., enjoyed speaking to one another and making jokes) when communicating in the elicitation tasks, regardless of their degree of familiarity. This finding is contrary to those of Norton (2005) and O'Sullivan (2002), who argued that language speakers only performed better when they were paired with friends instead of strangers in speaking tasks. Ockey, et al. (2013), on the other hand, reported that the degree of familiarity has no influence on language speakers' speaking performance, which seems to be consistent with my findings. I anticipate this happened because my participants were among those language speakers who enjoyed speaking the target language and who have perhaps used the elicitation tasks session as a platform to practise speaking and making new friends. However, my data analysis revealed that familiarity between speakers seemed to link with one type of CS, feigning understanding, and this was shared by two of the participants in my study. As shown earlier, they admitted to feigning understanding as a CS when interacting with their non-Malaysian acquaintances. This perhaps happened because they were not really close to their foreign classmates and, as advocated by Vandergift and Goh (2012), one tends to feign understanding if "the interlocutor is not

well known to them” (p.32). Thus, I speculate that my participants may tend to feign understanding more when speaking with unfamiliar people. Even though only two of them highlighted this strategy in relation to familiarity between speakers, this finding may help us appreciate that feigning understanding may be applied either intentionally or unintentionally by language speakers whenever they speak to someone who is not close to them. Additionally, the automatic response to use feigning understanding as a CS perhaps occurred to save face during communication, which is not the interest of this study.

One particular study by Plough and Gass (1993), even though not specifically in the area of CSs studies, seemed to be closely related to the current findings. This is because their study discussed the use of language strategies in familiar and unfamiliar dyads in communicative tasks. In their study, they highlighted that those paired with people they were familiar with tended to use language strategies specifically for confirmation checks and clarification requests, while mine showed that familiarity between speakers only affected the use of feigning understanding as a CS. That is, two of my participants preferred using this strategy when speaking to unfamiliar persons. Despite this difference, my findings help to highlight that, apart from confirmation checks and clarification requests, there is actually another CSs, i.e., feigning understanding, which may be affected by the degree of familiarity between speakers, contributing to the CS literature.

Physical context was another external CS factor that emerged from my data. As can be seen in 4.2.1 (d), my participants were utilising the resources available at the setting (e.g., bottles, ashtray) to aid their communication. They were also found to be naturally using their mobile devices as CSs, since these tools were perhaps being

regarded as one of the physical resources at the settings which they believed could be used to aid their communication. A look at the literature reveals that no such CS studies have reported language learners using either physical resources at the setting or mobile devices at the research settings. This is because CS studies were normally carried out in a contrived environment which was free from external variables or natural resources (e.g., Malasit & Sorobol, 2013; Manzano, 2018; Uztoşun & Erten, 2014). This kind of environment perhaps has no physical resources that language learners can use to aid their communication. I also assume that language speakers may not be able to use their mobile devices in the controlled environment as this tool, too, is considered an external variable. Even if they could carry their devices in such an environment, the probability of them using them may be low as they might feel it inappropriate to use mobile devices in a controlled room. This is because this kind of environment would give them the feeling of being tested or sitting an examination, which would automatically stop them from using their mobile devices in communication. This finding shows that the available physical resources in a setting can encourage language speakers to creatively use these means to succeed in communication. Thus, physical context can be considered a significant factor in communication that is worth exploring.

Finally, mobile device properties was the exciting external CS factor discovered in my data. As seen in section 4.2.1 (e) (i), my participants had and utilised their mobile devices at the natural settings. For two in particular, as evident in the data, one put his mobile phone in his lap while another was captured trying to take her phone out of her trouser pocket. This implies that mobile devices are indeed portable, movable, and ubiquitous, which has allowed my participants to deploy them in face-to-face communication, at any time and anywhere. The actions of my participants carrying and using mobile devices across locations is similar to the participants in the studies by

Alshammari (2020), Lai and Zheng (2018), and Dashtestani (2016). However, my findings differ somewhat from these researchers' as mine reported the use of mobile devices for communication and CSs purposes, while theirs mainly focused on the use of this tool for language learning. Despite this slight disparity, it needs to be pointed out that my findings suggest that portability and ubiquity support language learning and communication, as such affordances allow CSs to be utilised across locations (Hashim, et al., 2017; Lee, 2019)

Regarding multimodality, i.e., the multiple modes as a CS factor, in my opinion, has possibly influenced my participants towards extensive use of digital CSs for communication and language learning. As evident in section 4.2.1 (e) (i), my participants, namely Kathy and Bennie, for instance, were able to complete the picture-sequence task together at once right after Kathy resorted to Google Images and showed the relevant image to Bennie on her phone. In my opinion, the multimodal information available through Google Images, i.e., the frog life cycle images combined with textual information, had helped her partner, Bennie, to easily identify each stage of the frog's development and quickly learn the meaning of it, implying that multimodal modes are effective features in learning and comprehending new knowledge. Other participants, on the other hand, also manifested their keen interest in the different modes offered by mobile devices. They used their phones to record videos, take and send photos, as well as access Facebook. In my opinion, the multimodal features offered by mobile devices, has somehow encouraged my participants to keep using digital CSs for different purposes, especially in communication, due to its effectiveness in this regard. Rahimi and Allahyari (2019) and Cárcamo, et al. (2016) indicated that language learners were able to increase their vocabulary in terms of amount and test score once the teachers imposed multimodality (e.g., still images, mixed text, narration, and music) in teaching

new vocabulary, which thus suggested multimedia are effective features in vocabulary teaching and learning. These research findings may not be connected to communication strategies but, nevertheless, the key point here is that combined modes are effective for language learners, including my participants. Furthermore, my participants' behaviour in using different modes and combined modes in communication indicates that they are indeed aware of the different modes available in the meaning-making process and at the same time have the ability to choose the correct mode for communication, which is the essential skill of multimodal literacy (Kress, 2010). This mobile device's feature also led my participants to engage in communication using multimodal communication strategies, as presented in 4.2.3 (a).

In terms of immediacy, this particular CS factor has perhaps made my participants favour using digital CSs on their phones. If we look at 4.2.1. (e) (iii), my participant, Annie, was able to instantly come up with an alternative name for the item being discussed, **monkey bar**, during the face-to-face interaction. Additionally, other participants talked about using digital CSs like Google Search and online dictionary on their phones due to their immediacy. A look at the literature reveals that immediacy has been commonly highlighted in mobile learning studies. For instance, Nalliveetil and Alenazi (2016), Hazaea and Alzubi (2016), and Yurdagül and Öz (2018) revealed in their studies that their participants used and enjoyed using their mobile devices for language learning purposes as this tool supports immediacy. This is consistent with my findings, which also revealed the same phenomenon - my participants used mobile devices as they support immediacy. However, a little different from these researchers' findings, the participants in my study also exploited this mobile device function for communication purposes. This finding, in my opinion, may imply that immediacy,

similar to other CS factors, is an essential feature of mobile devices that might encourage the production of digital CSs among language speakers.

Regarding connectivity as a CS factor, I could infer that the availability of this element may influence the use of digital CSs in communication. I anticipate that one would be able to apply various digital CSs effortlessly with a good Internet connection, as was evident in 4.2.1 (e) (i), with the majority of my participants being able to utilise various digital CSs during the tasks and in their daily lives. However, in contrast to this, less, or no digital CSs can be employed by language speakers if they were at a place with limited or poor network coverage. Again, as can be seen in the same section, 4.2.1 (e) (i), I provided one of many examples of my participants who struggled to employ digital CSs due to unsatisfactory internet connections. The issue of connectivity has been discussed by many researchers, including Alwraikat (2015), Dashtestani (2016), and Hashim, et al. (2018), with them all agreeing that limited network coverage may interrupt the language-learning process. However, to my knowledge, no specific CS studies have discussed the issue of Internet connection on the use of CSs in communication, and so this finding, which highlights this issue, therefore contributes to the CSs literature.

Of these mobile devices, properties as a CS factor emerged from my data, where connectivity, portability and ubiquity, are the main distinctive features that allow the other advantages of mobile devices, such as multimodality and immediacy, to come to the fore. (Dhawan, 2020; Schrock, 2015). As argued by Dhawan (2020), connectivity is one of the main attributes of mobile devices that supports mobile learning. However, in my opinion, mobile devices' merits are not exclusively related to mobile learning but may also influence how language learners use digital CSs and communicate in general.

This is because without wireless connection, I foresee that one would only have limited access to mobile devices' multimodal modes, which in this context means digital CSs. Language learners may also not be able to receive immediate feedback of the digital CSs on phones at any time and anywhere if their mobile devices are not connected to WiFi. Additionally, with regard to portability and ubiquity these two attributes, which are frequently cited as mobile device affordances (Kukulska-Hulme, 2016; Park, 2011), also enable multimodality and immediacy in the sense that the participants would be able to deploy a variety of digital CSs instantaneously at any time and place of their choosing. Thus, in general, all mobile devices' properties are interrelated, with each individual characteristic or characteristics in combination, may be the influential CS factor affecting the use of digital CSs.

Overall, my study's findings concerning CS factors broadly support the previous literature on the subject (Jidong, 2011; Manzano, 2018; Rastegar, et al., 2016), indicating that these CS factors are significant in determining CSs usage in communication. However, mobile device properties as an emergent CS factor of this study cannot otherwise be found in the current CS literature, making it a valuable finding in this field. As argued by Wei (2011), the factors affecting the choice of CSs is nevertheless "either mixed or inconclusive" (p. 32). This is because the choice of CSs may not actually be determined by only one factor but as a result of a mixture of them (Jamshidnejad, 2020a; Mir Mohammad Meigouni & Shirkhani, 2020). These researchers' statements can be related with mobile device properties as CS factors, as explained earlier. Nevertheless, regardless of these researchers' viewpoints on CS factors, the current findings, in my opinion, have highlighted that the CS factors discussed, especially mobile device properties, are among the more important CS factors that might influence one's CS type and usage.

In addition, theoretically, the CS factors presented in this study appear to correspond to four of the five elements of Jamshidnejad's context taxonomy (2020). In my opinion, the physical context as a communication variable introduced by Jamshidnejad in his context taxonomy relates to the physical nature of a thing that may affect communication. Thus, based on my understanding of the physical context offered by Jamshidnejad (2020), I therefore believe that the physical context and mobile device properties that emerged from my data are suitable for categorisation under physical context, as these two factors are about the relationship of the physical nature of a place and item on communication strategies and communication in general. Meanwhile, attitudes, as a psychological construct, fall under the psychological context, and the familiarity between speakers can be classified as historical and relationship, whereas culture matches the cultural context. These findings thus confirm the influence of contextual variables on CS types in particular, and communication in general.

This study's finding also suggests that my study can be placed under the umbrella of pragmatics, which includes context as one of its elements, as outlined by numerous researchers such as Yule (1996), LoCastro (2003), and Laughlin, et al. (2015). However, slightly different from the pragmatics point of view, these contextual variables that emerged from my data explained the factors that may influence CSs in general, but not how to use CSs or communicate intended meanings appropriately in a specific situation.

To summarise, the findings suggest that contextual variables are a part of communicators and constantly encircle "each act of communication" as "no communication occurs in a vacuum" (Jamshidnejad, 2020a, p. 9). Therefore, additional

research into identifying CS factors is needed to better understand how these influence CS type and usage among language speakers in communication.

5.2.2 CS Functions

In general, I explained all the four emerging themes concerning communication strategy functions in the previous chapter. They are overcoming the linguistic deficiency of the spoken languages, gaining accuracy of the content knowledge in communication, giving one confidence to create conversation and build rapport, and achieving understanding in communication.

The first CS function, that of overcoming the linguistic deficiency of the spoken languages relates to using CSs to overcome shortcomings in the spoken languages' knowledge. The use of CSs to tackle the linguistic deficiency of the spoken languages by my participants seems to match the CS criterion concept (i.e., problematicity) described by Bialystok (1990), Faerch and Kasper (1983), Dörnyei and Scott (1997), and Sato, et al. (2019). They argued that speakers would resort to CSs if they sense any language-related problem that might disrupt their communication. This finding, therefore, suggests that using CSs to overcome communication problems caused by insufficient knowledge of spoken languages is probably a natural plan used by language learners in communication.

Additionally, CSs can be used not only to encounter a language-related problem but also to solve content knowledge and gain accuracy about it in communication. The concept of content knowledge in my study is in line with Stoller (2002), who describes it as the information of a particular topic or subject matter of the world. Examples of content knowledge are health, environment, demography, design, and so forth, which

can be gained from various resources such as newspapers, books, videos, and formal and informal discussions with people and other necessary materials (Stoller, 2002). Specifically, my participants used digital CSs such as Google Search, WhatsApp, and Google Images to gain information, comprehend, and achieve accuracy of the topics discussed in communication. A review of the literature reveals that there are studies that discussed using technology associated with learning content knowledge (e.g., Hafner & Miller, 2011; Miller, 2016; Miller & Wu, 2018). For instance, Miller and Wu (2018) mentioned that their participants learned about Chinese food and gained accurate information about it through discussions in WeChat.

As for Hafner and Miller (2011) and Miller (2016), their participants, on the other hand, together learned about the topics given to them during a digital storytelling project. However, to my knowledge, no CS studies have specifically studied content knowledge and described how language learners could use digital CSs to gain accurate information about it. In this respect, my study has expanded the literature. In addition, this finding is considered interesting as it shows that CSs are not limited to dealing with spoken language shortcomings but are also useful in overcoming the deficiency of the content knowledge and gaining accuracy of it, which also adds to the literature on CSs. However, it should also be highlighted that gaining accuracy of the content knowledge varies from one person to another, provided learners have proper information-seeking strategies which happened not to be the interest of the study.

The third function - giving one confidence to create conversation and build rapport using digital CSs - was another newly found CS function in CSs that contributes to the CS literature. It appears to me that speakers of any language within the capabilities of Google Translate would be able to, first, confidently communicate face-to-face and

engage in online conversations instead of being silent and, second, build rapport between individuals despite language and nationality differences. This finding corroborates the ideas of Clothey (2015) and Lee (2017), who suggested that the communication barriers between people of different languages could be overcome through the application of Google Translate, meaning that communication between different speakers of other languages is possible with this digital CS. However, my finding, a little different from these researchers' ideas, further suggested that Google Translate can also help people feel confident to create conversation, a point which adds to the CSs literature. This finding also further reflects Lee's (2017) idea, who highlighted that Google Translate makes possible conversation between two or more mutually unintelligible speakers in a myriad of contexts thanks to its automatic speech detection technology. The present finding also recommends that in today's technology-driven society, speakers can now opt for Google translation as a CS, despite learning the intended language, as an alternative to establish rapport among individuals. Therefore, I can say that Google Translate is likely to be significant to language learners in terms of being employed when they want to create conversation effectively with people of different language backgrounds.

Finally, my participants also used CSs to achieve understanding in communication. This kind of CS function is expected as language speakers commonly use CSs to understand communication and seem to align with one of the purposes of the communication strategies discovered by Swiatek and Pluszezyk (2016). They stated that, via CSs, speakers can "be understood and understand others, and on the whole, succeed in conveying the message ..." (p. 39). Other scholars, such as Lam and Wong (2000), have also highlighted that clarifying oneself and helping others understand one's spoken messages are vital in communication and, therefore, they believed that

language speakers need to be taught CSs explicitly. Similarly, Littlemore (2003) posited that making oneself understood by an interlocutor is one of the three aspects of communicative effectiveness, and considered a common aim among language speakers. Looking at these researchers' statements, I anticipate that attaining understanding in communication can be regarded as a key purpose of CSs. Therefore, it was not surprising to find my participants employing various CSs such as paralinguistics, appeals for help, and Google Images to achieve this CS function, that of achieving understanding in communication. However, out of all the CSs mentioned above, Google Images, which can work as an aid to achieve understanding in communication, to my knowledge has not been specifically highlighted by any CSs researchers. Thus, in this respect, my finding has added to the CSs literature.

The findings showed that my participants used CSs in the target language for multiple functions, which according to Leech (1983) and Laughlin, et al. (2015) involves the use of pragmalinguistics. For instance, my participants used the target language to achieve understanding in communication (see 4.2.4 (d)), which suggests that my study is situated under the pragmatics concept. However, as evident in the data, these participants used CSs alongside pragmalinguistics in delivering their communication intentions. Their action of utilising these CSs to achieve their communication goals, therefore, supports the arguments made by Faerch, et al. (1984), Celce-Murcia, et al. (1995), and Celce-Murcia (2007), who contended that a language speaker will resort to CSs whenever they lack the linguistic knowledge to achieve their communication purposes. This finding thus verifies that there is a symbiosis between strategic competence and pragmatic competence.

My findings concerning CS functions seem to be in line with Canale's (1983) strategic competence (SC) characteristics. The first theme of CS function that showed my participants used CSs to overcome linguistic difficulties relates to the first purpose of SC by Canale (1983), which is to overcome communication breakdown in communication. The other three themes of the CS functions that appeared in my data correspond to the second function of Canale's (1983) SC, which is to enhance communication effectiveness. The findings regarding CS functions in my study further validate the arguments put forward by Clennell (1995), Ting and Lau (2008), and Sato, et al. (2019), who contended that CSs do not only operate as compensatory devices but also as pragmatic strategies (Sato, et al., 2019).

Additionally, the functions of CSs appeared in this study can be associated with the two main types of communication functions, namely the intrapersonal and the interpersonal (Brown & Yule, 1983; Jamshidnejad, 2020b). As stated in section 2.10, intrapersonal communication relates to the psycholinguistic perspective of CS that is making an "individual conscious plan" (Faerch & Kasper, 1983) to overcome their linguistic difficulties to achieve the communication goals successfully (p. 36), whereas interpersonal communication is associated with the interactional approach of CS which "serve to create and maintain a good relationship between the speaker and hearer" (Lin, 2020, p. 70). Pertaining to my findings, I discovered that my participants, in achieving all the communication functions that appeared in this study, have initially taken their individual conscious plan, i.e., employing CSs to tackle linguistic difficulties in the spoken language, using Google Search to check the accuracy of the content knowledge, utilising Google Translate as a CS before initiating conversation with other speakers of different languages, and making use of different types of CS to transfer intended meanings to other interlocutors to achieve understanding in communication. Their

actions in resorting to an individual-centred strategy apparently relate to the intrapersonal communication function and, by them doing this, eventually lead to another communication function, namely interpersonal communication. Thus, this finding recommends that communication consists of both elements, the intrapersonal and the interpersonal. My opinion is in line with the arguments made by Uztosun and Erten (2014) who contended that “during communication, both interlocutor and speaker experience cognitive processes, and these are mainly modified through interaction” (p. 57).

I have thoroughly discussed the factors and functions of communication strategies in this section. The next section deals with the final research question, which discusses the possible effects of using mobile devices as CSs in interactions.

5.3 Research Question Three

3. Are there any effects of employing mobile devices as CS in interactions?

The data suggests that mobile devices influenced communication and CSs, which is explained via the built themes and subthemes presented in this part. The first theme is multimodal communication strategies (MCSs). The second theme is autonomous communicator, which has one subtheme: silence in interactions. The final theme is collaboration, which consists of two subthemes: working together across locations, and fostering more interactions between speakers.

Multimodal communication strategies is a new term introduced in my study. It refers to the employment of traditional communication strategies (TCSs) in combination with digital communication strategies (DCSs) in communication. To the best of my knowledge, no CS researchers have discussed the use of this strategy in a

face-to-face manner in CS studies. Therefore, the descriptions about multimodal communication strategies emerging from my data will contribute to the CS literature. MCSs in my study can be linked to the notion of multimodality. The term multimodality refers to the use of multiple modes of communication, ranging from the linguistic, visual, spatial, gestural, audio, to physical resources, including the technology used to create meanings and understanding (Heberle, 2010; Kress, 2000; Royce, 2007; Stockwell, 2010). Based on the definition of multimodality provided by these scholars, I inferred that our modes of communication are no longer limited to spoken, written, and gestural modes.

As evidenced in my study's data, most of the participants employed multimodal communication strategies; specifically, they employed traditional CSs in conjunction with the digital communication strategies offered by their mobile devices during communication. This finding is consistent with Dooly (2018) and Yeh (2018), whose participants also utilised multiple modes on their devices to create meanings. However, the difference between my study's findings and those of these researchers is that their participants coordinated different modes, such as using text and voice translators, images as well as music for language-related activity held in a classroom, while mine used multimodal modes on their mobile devices as CS in face-to-face communication. My participants' actions in terms of using digital CSs alongside traditional CSs meant that they no longer rely solely on 'linguistic' means of communication. This emergent phenomenon suggests a paradigm shift within the practice of communication strategies among language speakers - from traditional to multimodal CSs - which I find worth emphasising.

Additionally, as shown previously, the participants were finally able to achieve their communicative goals by employing digital CSs. From this finding, I anticipate that traditional and digital communication strategies have different potentials in making meaning. This is supported by Cope and Kalantzis (2009), who suggested that various modes have different affordances. This means that some modes of communication may be suitable for certain tasks but not others. This finding also indicates that a digital mode can be considered an effective alternative resource in meaning-making (Lee, 2014; Lindell, et al., 2015). From this finding, I also anticipate that the multiple modes afforded by technologies, such as mobile phones and related devices, have provided users with a medium to use them creatively as communication strategies in communication, and for various other purposes. Overall, no previous CS studies have specifically discussed multimodal CSs, and thus it is anticipated that these explanations about them may help us to understand a bit about the relationship between multimodality and CSs.

The next theme illustrated in this section is that of autonomous communicator. The literature review of CSs recommended that teaching communication strategies to language learners (e.g., approximation, word coinage, and circumlocution) might allow for the development of a sense of autonomy among them (Faucette, 2001; Manchón, 2000; Popescu & Cohen-Vida, 2014). For instance, Manchón (2000) highlighted that language speakers who received communication strategies training would be “aware of the fact that one does not always have to use the exact word in order to be communicatively effective” (p. 21). This kind of awareness, as argued by Manchón (2000), may push the language speakers to creatively utilise the taught CS as a means to deliver their intended messages. Additionally, Faucette (2001) asserted that those equipped with communication strategies would be able to independently communicate

in the target language, despite their linguistic shortage of the target language, as the CS taught may be utilised as a tool to aid their communication. In agreement with these researchers, Popescu and Cohen-Vida (2014) emphasised that one would be able to become autonomous communicators of any learnt languages with the knowledge of communication strategies. However, with the presence of mobile devices in our everyday lives, I anticipate that those without formal CS training will regardless have the potential to become effective autonomous communicators via the application of mobile devices as a CS in communication.

By owning a mobile device, language learners may indeed be able to become autonomous learners as this tool provides them with the opportunity to take charge of their own learning, direct it, and engage in language activities that suit their individual needs and goals (Kruk, 2017). Another researcher, Djoub (2016) who shares the same point of view as Kruk (2017), asserted that the use of mobile devices may help to promote learner autonomy among language learners, as this tool “supports different learning styles with a wealth of resources” (p. 294), which would encourage them to take more responsibility of their own learning. Besides using mobile devices autonomously for language learning, they would also be able to take control of their communication via the application of this tool as a CS, which happened to be the finding of my study. For instance, as presented in section 4.3.2 (b), I found that the participants resorted to their mobile devices to support their L2 knowledge when communicating, and sought Google on their devices to find information about issues of interest whilst chatting. The findings so gained from them provide a new understanding of mobile devices’ use in communication strategies studies. That is, they autonomously employed their mobile devices as one of the CSs whenever they were faced with communication difficulties. Apparently, their actions of autonomously using their devices to solve their

communicative problems suggests that they were competent in seeking reliable information autonomously without assistance from one another, which is in line with the concept of personal autonomy put forward by Benson (1996) that highlights the learner's individuality in terms of learning style and preference of learning activities. From this scholar's definition of personal autonomy, I may infer that learners are free to choose any learning materials that fit their styles and preferences in using mobile devices. The reason is that the mobile device "creates a space for students to adjust the learning material and activity to their own availability" (Nurhaeni & Purnawarman, 2018, p. 44). In other words, mobile devices are regarded as a perfect enabler for learning. But not just for learning, as I assume that mobile devices could also be an enabler for language speakers in communication. The emergent findings, as presented earlier, seem to meet my statement above, when the participants were believed to freely apply their own information-seeking styles to search for intended items using their mobile phones. The actions performed by these participants signified that they were able to be in charge of their communicative problem effectively.

This finding, which reveals that my participants autonomously used mobile devices for communication is similar to those of Jurkovič (2019), Hilao and Wichadee (2017) as well as Varga, et al. (2020), who indicated that learners autonomously used mobile devices for language learning and communication. However, a little different from these studies, mine discovered that mobile devices could be independently operated as one CS in face-to-face interactions. As such, this present finding would seem to contribute to CS literature that has not so far mentioned the relation between mobile devices as one of the CSs and learner's autonomy.

The subtheme associated with autonomous communicator is silence in interaction, which is the striking finding of this study. Researchers have agreed that silence is a complex phenomenon that comes with varied definitions (Qian, 2020; Yu, 2016). However, in general, the term silence, as highlighted by Levinson (1983), refers to “the absence of vocalisation” of a communicator in communication (Yu, 2016, p. 106). Simply put, silence refers to a speaker making no verbal outputs in interaction. The literature reveals that silence is usually investigated by researchers within the classroom context (e.g., Han, 2020; Maher & King, 2020). However, the present study revealed that this phenomenon might also occur during interaction in natural settings, as presented in section 4.2.3 (b) (i). Most of the participants kept silent whenever they autonomously resorted to their mobile devices as a CS in interactions conducted in natural settings. This phenomenon is consistent with Dooly’s (2018) participants, who portrayed almost no verbal interaction when they utilised technology during group work. In my opinion, the absence of oral input in communication seemed undesirable. This is because I anticipate that “the existence of silence may be an obstacle to acquiring the target language” (Harumi, 2011, p. 260).

I also assume that using a mobile device as a CS somehow encourage speakers to speak less or perhaps end up in isolation. However, Dooly (2018) argued that this speak-less-or-almost-none situation actually promoted a focus on individual work, meaning that they would have the autonomy to accomplish the tasks using any preferred means offered by technology. The phenomenon of silence, as stated in the literature, comes in two types: positive and negative silences. As defined by Yu (2016), this term refers to a situation where learners are in a state of thinking after hearing their teacher’s question. Based on his definition, I could infer that my participants were indeed creating

a positive silence as they, too, were in a thinking state, trying to solve the task using their mobile device as a CS.

With regard to speakers' silences in interaction, other researchers, such as Cohen and Guichon (2014), also discussed this phenomenon in their study. Specifically, they investigated silences in language learner-tutor interactions. They compared the use of video conferencing with audio conferencing for communication and discovered that more silences appeared in audio conferencing than video conferencing. According to them, this happened because audio conferencing "did not offer paralinguistic cues for turn-taking, whereas video conferencing facilitated a rapid and seamless conversation" (Satar, 2016, p. 307). Thus, I postulated that different technologies might affect how we communicate and mobile devices, as one of today's technologies, can also alter the way people interact. As for my participants, most of them surprisingly became silent whenever they started utilising their mobile phones to complete the elicitation tasks. I anticipate that long silences among them were due to using mobile devices as a CS. However, it was still quite unfair for me to fully declare mobile devices as the primary variable of silence in communication as other numerous factors such as learner, teacher, and cultural factors may, too, promote silence in communication (Basöz & Erten, 2019; Sasaki & Ortlieb, 2017) and which may require further investigation; however, this is beyond the interests of the present study. To my knowledge, the phenomenon of silence and the use of mobile devices as CSs, has not previously been explicitly mentioned by any CS researchers. Therefore, this finding provides a further contribution to the CS literature and since this issue seems important in the area of CS, further study with more focus on it is recommended. Overall, it was interesting to see that despite the growing value of the mobile device, this tool also comes with its own diminishing value, i.e., silence, which was highlighted in this study.

Collaboration is another exciting finding that was yielded by my data. It was found to be connected with the concept of communication strategies by Tarone (1980). She emphasised that using CSs in communication refers to speakers' collaborative efforts in interaction to achieve the communication goal. With this meaning that collaboration would inevitably happen in communication when the communicators utilise communication strategies while speaking to one another in communication. However, the idea of collaboration within the communication strategies concept proposed by Tarone (1980) was related to traditional communication strategies, which is partially suitable for the present study that integrates mobile devices as one of the CSs. Thus, the theme of collaboration that appears in my study can be considered unique to the field of CS as this concept is linked with mobile devices, which are regarded as a CS in the present study. To my knowledge, this finding has not been discussed explicitly in the CS literature, and hence it constitutes a further contribution. A huge amount of the literature has revealed that collaboration is typically linked with technologies such as mobile devices (e.g., Scanlon, 2014; Shadiev, et al., 2018). For this reason, it is therefore not a surprise to see that this theme appeared in my data. Collaboration has two subthemes, namely working together across locations, and fostering more interaction between speakers.

The first subtheme describes that my participants have utilised the digital CSs offered by mobile devices in a collaborative fashion. To be exact, they applied different types of digital CSs offered by mobile devices, such as video call and WhatsApp, to discuss and share any topics or subjects of interest in a collaborative manner, either online or both mediums - offline and online - at the same time in various locations (see 4.2.3 (c) (i)). This finding is in accordance with previous studies such as those by Miller and Wu (2018), Huang (2019), and Chen (2013), who contended that language learners

were able to work together on a discussed topic using their mobile devices, despite being in different locations. On the whole, this finding suggests that the capabilities of mobile devices that allow communication at any time and anywhere may also indirectly promote the use of communication strategies among participants in communication. Therefore, I believe that participants may actually be able to practise using communication strategies via mobile device applications collaboratively. However, I believe that practising communication strategies collaboratively via mobile phones would be more effective if the learners were exposed to how to pursue CSs with this tool. Thus, future research should address this issue to gain a better understanding of the use of mobile devices as a CS and its relationship with collaboration.

The second subtheme of collaboration, i.e., fostering more interaction between speakers, has been presented through the participants (i.e., the Fiza-Tendy and Sabby-Pilee pairings) as depicted in section 4.2.3 (c) (ii). Looking back at the findings, I could see that both Fiza and Tendy, despite having never visited the two places (BMW Museum and Neuschwanstein Castle) were able to share and construct knowledge about them with some degree of confidence via the use of a mobile device as a CS. Without mobile devices, I assumed that they may not be able to so easily have come up with accurate descriptions about the places as neither have never been to them. They, undeniably, may create their own fictional descriptions about these places but via the utilisation of mobile devices as a CS, they were able to provide facts about them and were able to indirectly learn about the places by searching and reading for the information about them on the phones. The information gained from the digital CSs has encouraged more interaction between them because they had adequate inputs about these places to be able to discuss them. Thus, I anticipate that the utilisation of mobile devices as a CS by these participants has fostered communication between them.

Similarly, as for the Sabby-Pilee pairing, from what I could observe, the use of mobile devices as a CS also fostered more interaction between them. This can be seen from the extract where Pilee seemed to be interested to know more about the **cendol** (as seen in lines 18 and 19) each time Sabby shared more information about this dessert, as gained from her mobile device. In general, I anticipate that Sabby, despite not having proper knowledge about **cendol**, was able to smoothly deliver the steps required to make it via the utilisation of a mobile device as a CS, and consequently increased their communication and collaboration. Undeniably, my participant, Sabby, may have been able to talk about the target item - the dessert - with her partner. However, I foresee that their interaction about it may not have been as lengthy as shown in the extract, as she perhaps may have run out of words or faced difficulties in specifically describing the **cendol**-making process, with which she was not familiar during the role-play task. Simply put, without a mobile device, it may have been difficult for my participant to deliver the information about the discussed item in a convenient manner. This situation may also have affected her counterpart, Pilee, as she probably would have had no idea about how to inquire further about this dessert, which she was unfamiliar with, which thus may have ended with a smaller amount of interaction. In my opinion, less interaction, similar to silence, is also deemed undesirable among language speakers, which may require further investigation.

Overall, from this finding, I anticipate that the use of mobile devices as a CS may foster increased interaction between speakers. This is because they would be able to utilise different types of digital CSs offered by mobile devices to increase communication and participation among them. Even though they did not explicitly mention the types of digital CSs (e.g., Google search, Google Translate) used during the role-play, the essential point here is that by using these CSs on mobile devices, they

managed to keep themselves engaged and enthusiastically communicated with one another.

As argued by Ramamurthy and Rao (2015) and Miller and Wu (2018), the feasibility of mobile devices and their potential for multi-usage may enhance collaboration and allow interaction to flourish. These researchers' statements reinforce my consideration that mobile devices can be used to foster interaction between speakers, and it is now understandable why my participants actively interacted and were highly engaged in communication. If mobile devices can foster more communication between speakers, it is then possible to foster more CSs via the use of this tool in communication. Thus, future research can perhaps address the fostering of CSs usage using mobile devices.

Theoretically, the theme collaboration and its components align with one of Vygotsky's (1978) sociocultural theory perspectives, which emphasises that cultural artefacts, directly and indirectly, mediate human activities with the environment. For instance, as evident in sections 4.2.3 (c) (i) and (ii), mobile devices have become the mediational tool for my participants to search for relevant information and collaboratively share information about the topic being discussed, which eventually fosters interaction and active engagement among language speakers (Asabere, 2012; Shadiev, et al., 2018; Sung, et al., 2017).

Overall, I have discussed the usability of mobile devices as a CS and in communication as a whole. To my knowledge, no CS research has specifically addressed mobile devices affordances and their impacts on CS usage. Thus, this finding, while preliminary, suggests that it would be beneficial for much subsequent CS research to consider the synergy of mobile devices and CSs.

5.4 Chapter Summary

In this chapter, the findings have been analysed, discussed, and linked with the extant literature and underpinning theories to answer all the research questions and subquestions proposed in the present study. In addition, my own thoughts and interpretations in explicating the findings of my research were also included.

We now move to the final chapter, the conclusion.

CHAPTER 6

CONCLUSION

This chapter presents the conclusion of this research study. It includes a summary of the study, its potential contributions, implications, and recommendations, the study's limitations as well as the direction for future studies. Together with these aspects, I also include my personal reflection with respect to the entire course of this research.

6.1 Summary of the Study

A summary in relation to the three research questions and their subquestions is addressed in this section. Before I continue summarising each of them, I will restate them in their entirety here.

1. Do the participants employ communication strategies in interactions?
 - a) What are the examples of strategies being employed in interactions?
 - b) Are mobile devices being employed in communication strategies?
 - c) Which mobile devices applications are being used to interact?
2. What are the reasons behind the use of these communication strategies?
3. Are there any effects of employing mobile devices as CS in interactions?

6.1.1 Research Question One

The participants of my study were discovered to be using a wide variety of communication strategies in communication. Specifically, they employed two types of CSs, traditional and digital. Traditional CSs refers to the CSs produced by the speakers without using any technological devices, whereas digital CSs refers to using mobile devices as CSs in communication. Examples of traditional CSs utilised by the

participants were circumlocution, code switching, paralinguistic, amongst others that can be reviewed in Chapter four. The use of traditional CSs by the participants seems to corroborate other previous CSs research (e.g., Malasit & Sorobol, 2013; Manzano, 2018; Uztosun & Erten, 2014). The consistency of this finding with other CSs studies suggests that traditional CSs are indeed an important component in communication for language speakers. In addition, the participants of my study, as noted in Chapter four, also utilised digital CSs in communication. The examples of digital CSs they used were Google Search, Google Images, Google Translate, and others. These newly found CSs were used by my participants in communication, and some indicated using these for language learning purposes. They also mentioned using digital CSs face-to-face and online for many other functions discussed in Chapter 5. Additionally, it is also reasonable to say that, overall, the participants' traditional and digital communication strategies used in the study can be categorised as achievement strategies.

In summary, the participants used a large array of CSs, particularly achievement-type strategies, in the course of their interactions.

6.1.2 Research Question Two

The participants of my study used CSs for various reasons. These reasons, as identified from the data, consisted of various factors and functions. As presented in Chapter four, several CSs factors were found to relate to my participants' CS usage. These factors were attitude, culture, familiarity between speakers, and physical context. Interestingly, my data suggested that the characteristics of mobile devices have influenced the use of digital CSs among the participants. These were portability and ubiquity, multimodality, immediacy, and connectivity. Other CS studies have also considered the factors of CS in communication (e.g., Ghout-Khenoune, 2012; Jidong,

2011; Rosas-Maldonado, 2018). However, as I explained earlier, with respect of some of the findings connected to the first element, the CS factors found in my research have not been mentioned in any previous CS studies, thus thereby contributing to the CS literature. For example, in association with attitude as a CS factor, I identified that my participants have a positive attitude towards using digital CSs in communication. To me, this type of CS seemed to link with *achievement strategies*, but no prior CS studies have mentioned such a connection and I thus decided to highlight the relation of these two strategies, as detailed in section 4.2.1(a). As for the properties of mobile devices, to my knowledge, no CS studies have mentioned them as a possible factor that might influence the use of digital CSs in communication. This unique finding thus, again, expands the CS literature.

As discussed in section 5.2.1 (a), the factors of CSs discovered in my study align with the contextual variables listed in Jamshidnejad's (2020) context taxonomy, which further implies that a variety of factors may naturally influence how language speakers, including my participants, choose and use CSs in communication. Furthermore, the different factors affecting CSs usage emerging among my participants indicated that the study falls under pragmatics. This is because pragmatics incorporates contextual variables into its concept. Unlike the findings of my study, which highlighted the influence of factors concerning CS in general, contextual variables in pragmatics are concerned with using language appropriately in a situational context. Regardless of this minor difference, a significant point here is that contextual variables/factors are an inherent part of communication that have naturally influenced my participants' use of CSs in communication.

Regarding the CS functions, I discovered that my participants used different types of CSs to convey various communication functions. Specifically, CSs were used by them to overcome any linguistic shortage in the spoken languages, gain accuracy of the content knowledge in communication, give confidence to create conversation and build rapport with others, and to achieve understanding in communication. Furthermore, the use of digital CSs in achieving communication functions which emerged in the data I regard as unique to my study given that, to my knowledge, no CS researchers have highlighted the use of this kind of CS as one of the communication functions, representing another contribution to the literature. For instance, as identified in the data, digital CSs such as Google Translate gave my participants' the confidence to create conversation and build rapport with others in communication.

Taken together, the participants of my study used CSs due to various factors and for different functions.

6.1.3 Research Question Three

The use of mobile devices as CSs seemed to affect my participants' communication practices. First, with the presence of mobile devices in my participants' everyday lives, they were found to be employing traditional CSs combined with digital CSs, which I have termed Multimodal CSs (MCSs) in communication. This use of MCSs allowed my participants to creatively utilise any traditional CSs in combination with digital CSs to achieve their communication goals. Additionally, the use of mobile devices as CSs led to my participants becoming autonomous communicators. They were found to be able to seek information autonomously with the use of mobile devices as CSs. However, I also detected a disadvantage of this autonomous use of mobile devices, namely that they promoted silence. The participants seemed not to produce any oral

inputs whenever they started referring to their phones during communication. This issue, in my opinion, should be explored further in future research. Finally, my participants tended to perform collaboratively with their mobile devices at hand. First, they were able to work together on a topic of interest across locations; and second, they were able to increase their participation and interaction when speaking to each other via the application of mobile devices as CSs. Overall, I could see that the use of mobile devices as CSs had certain impacts on my participants' communication.

In the foregoing, I have presented a summary of each research question and its subquestions. We will now turn to the next section, the contributions of the study.

6.2 Contributions of the Study

This research contributes both empirically and theoretically to the field. Empirically, the present study went against the norm of communication strategies research in four different aspects, namely the research focus, the nature of research, the approach to study and analyse CSs, as well as the context in researching CSs. My research, as stated in the previous chapter, focuses on exploring the use of CSs, including the use of mobile devices as one of the face-to-face CSs. To date, no CS studies have been conducted to explore the use of mobile devices as one of CSs in face-to-face settings, so this work adds to the literature. Based on the existing CS literature, I also found that no Malaysian scholars (e.g., Ismail & Kaur, 2012; Omar, et al., 2012; Sulaiman, et al., 2018) from the CS field have explored the use of mobile devices as a face-to-face CS among non-native English language speakers of different nationalities at the university level. Therefore, my research, which focuses on exploring the use of CSs, including the face-to-face application of mobile devices among the abovementioned participants, thereby adds to the literature.

In terms of the nature of CS research, the literature shows that a significant number of studies have been carried out either quantitatively or using the mixed method approach (e.g., Hung & Higgins, 2016; Nakatani, 2006; Poulisse & Schils, 1989; Ugla, et al., 2013b). On the other hand, my study is qualitative in nature and, to my knowledge, little information about qualitative CS studies can be found in the literature. Regarding the approach to study CSs, researchers of CSs have, since the 1980s, typically conducted such studies in laboratory settings (e.g., Haastrup & Phillipson, 1983; Manzano, 2018; Ting & Phan, 2008). They conducted these studies in laboratory settings for various reasons, one of them being to minimise the external variables that could affect the studied phenomenon (other reasons were clarified in Chapter three (see section 3.6.1). Instead of using the traditional approach to study CSs, I came up with an innovative approach to study them, which I named the quasi-natural CS elicitation research approach. As explained in Chapter three (see 3.6.3), the quasi-natural CS elicitation research approach is the combination of natural and unnatural elements from two different techniques, namely laboratory and naturalistic. Specifically, I employed artificial tasks in natural settings to obtain CSs. Quasi-natural, as described in the previous chapter, may be able to elicit various CSs, including the use of mobile devices as a CS. To my knowledge, this approach is considered novel since no CS researchers to date have studied CSs using this approach. Besides the quasi-natural CS elicitation research approach, I also employed dyadic interviews to elicit further CSs usage among the participants. As indicated in the literature, CS researchers usually perform interviews to gain more knowledge about the use of CSs during elicitation tasks (e.g., Omar, et al., 2012; Rosas-Maldonado, 2018; Uztosun & Erten, 2014). However, adopting a different approach to other CS researchers, I carried out interviews to gather additional information about the participants' use of CSs, including with respect to

mobile device usage, not just during the tasks conducted but also in their daily communication. Thus, the idea of conducting interviews to gain more information about CSs usage beyond elicitation tasks also contributes to the CS literature.

I also identified from the literature that many CS researchers preferred to examine the frequency of each type of CS used by the participants in their study using quantitative measuring tools such as SPSS and ANOVA (e.g., Gan, et al., 2017; Hua, et al., 2012; Uгла, et al., 2013b). However, there were undeniably researchers who resorted to qualitative data analysis in exploring their participants' CSs usage in communication, but these were relatively few compared to those using quantitative data analysis. For instance, Zulkurnain, et al. (2014) analysed the reasons behind their participants' English communication difficulties using thematic analysis. Likewise, Somsai and Intaraprasert (2011) also used a thematic analysis method to identify the strategies used by Thai learners in coping with face-to-face oral communication. With regard to my research, I have used thematic analysis to analyse my study data and I believe this technique, in analysing CSs data, is a useful addition to the literature on CSs.

Moving to the next aspect, I now consider the context and setting of CS studies. My research was performed face-to-face in a natural setting, as described above. If we look at the literature, numerous CS studies have been undertaken face-to-face for a number of decades and, until now, CSs researchers have preferred this medium to research CSs (e.g., Ghout-Khenoune, 2012; Haastrup & Phillipson, 1983; Wongsawang, 2001). However, after the dissemination of information technology (IT) in second and foreign language teaching and learning, CS research has shifted from the face-to-face mode to the CMC mode (e.g., Hung & Higgins, 2016; Smith, 2003).

However, so far, unlike my study, none have combined both contexts, those of face-to-face and CMC, in researching CSs. In this study, I specifically combined the face-to-face context with mobile devices that come with the CMC environment to study CSs. Consequently, such an approach can be considered a contribution to the growing body of literature.

In terms of theoretical contribution, I expanded the Dörnyei and Scott (1997) Communication Strategies Taxonomy to cater for the data gathered from my research. The taxonomy that I updated contains two main categories, traditional CSs and digital CSs. My taxonomy, which I have termed as MCS taxonomy shows that English language speakers of various nationalities are now using digital CSs derived from mobile devices such as Google Search, along with traditional communication strategies such as circumlocution. The MCS taxonomy, in my opinion, is appropriate for CS researchers who are seeking to explore both traditional and digital CSs in communication and, thus, it is hoped that this revised taxonomy will also be considered as a contribution to the CS literature.

6.3 Implications and Recommendations

As I have discussed, in the present study, my participants used a wide range of CSs which can be divided into two types of major CSs, namely those of traditional and digital CSs. The use of these CSs has suggested that language speakers are no longer dependent on only one type of CS, i.e., traditional CSs. Knowing that language speakers are now using digital CSs alongside traditional ones is such an important finding for the present study because it shows that the practice of CSs has evolved with the presence of mobile technologies. Thus, hopefully, through the finding of this study, language speakers will become aware of and understand their own current CS practices, which

includes both traditional and digital CSs. By gaining both understanding and awareness of their own CS usage in communication, participants would, in my opinion, be able to effectively address their own communicative problems via the use of these CSs. Additionally, the present findings also help the language speakers explicitly identify the various CSs that they may prefer and find useful in interaction. Undeniably, all CSs are of help in communication, but knowing various types of CS would offer language speakers the opportunity to choose and use whichever CS they are comfortable with in communication. I also recommend that language speakers explore, learn, and practise using CSs as this would be useful for them in their everyday communication. By having knowledge of CSs, language speakers would gradually develop the confidence to speak the target language and enjoy using these strategies with other people who speak English. However, it is also advisable for language learners to be familiar and aware of the achievement-type strategies as such a strategy may contribute to successful communication (Hussin & Devi, 2015).

The present study also revealed numerous factors and functions that were linked with CS usage among the learners of my study. This finding may help language speakers to recognise and take note of the factors and functions that may potentially influence their choice and use of their CSs. Finally, the effects of using mobile devices, as one of the CSs presented in the study, may help language speakers to be aware of the boons and banes of using these digital CSs in communication.

As for educators, the study findings would hopefully aid them in terms of gaining a better understanding and of being informed of the language speakers' current CSs practice. That is, learners now use traditional and digital CSs in communication. Since learners now use both forms, they should be taught and equipped with those CSs

that are advantageous to them. The reason is that these CSs may help learners to be confident in speaking the target language. In my opinion, educators could help to build self-confidence in the use of these two major CSs in their learners by adopting teaching activities that incorporate both traditional and digital CSs in the classroom. By teaching digital CSs alongside their traditional counterparts, I believe that learners would be able to efficiently communicate their intended messages via these combined CSs. The educators should also introduce and encourage language learners to reflect and discuss the differences between the achievement-type strategy and reduction (avoidance) strategies in terms of its usefulness in communication. This way, the language learners' awareness of the achievement-type CS strategies could be increased.

Furthermore, the study's finding with respect to suggesting that there are factors and functions behind CSs in communication may help educators to be mindful of these elements, which may either hinder or encourage speakers to communicate effectively. As for factors, it is undeniable that these are indeed complex and may vary from one learner to another (Huang, 2010). However, these findings may at least caution educators to be aware of them and therefore take additional care in the process of teaching of CSs to their learners.

With respect to CS functions, I believe that it is important for educators to introduce CSs and their functions as each might be useful in a particular communicative situation. This is because language learners, including my participants, might not always be aware of their use of CSs and functions, resulting in their ineffective, or at least less effective, use in communication. Thus, by educators introducing and making their learners being aware of the advantages of utilising different CSs to solve their communication problems, I believe that the learners might be able to identify and

choose more appropriate CSs and use them in more creative and efficient ways to achieve their communicative goals. The final finding, dealing with the consequences of using mobile devices in communication, also benefits educators in terms of gathering inputs about the advantages and disadvantages of using mobile devices as a CS in communication. By having access to such knowledge, educators would be able to design appropriate and effective teaching strategies in teaching CSs to their learners.

Furthermore, this study's findings may be valuable to curriculum developers and material designers, as this research provides information on the use of language speakers' current communication strategy practices. Once they have gained the required information about language speakers' CSs use in day-to-day communication, curriculum developers and material designers may give serious consideration to its use in designing and integrating effective strategic training in a communicative syllabus in English communication courses, including across educational institutions from the primary to higher education levels. Undeniably, there are available English language teaching (ELT) materials which include the teaching of communication strategies, but the majority of them still lack in the following ways: first, they only offer few effective practice activities to develop strategic competence (Faucette, 2001). Second, they lack explicit content for teaching and learning CS (Abdelati, 2019), and certain CS strategies have been neglected in textbooks with, surprisingly, a notable inclination towards the teaching of certain CS strategies detected in ELT textbooks in the English as a Lingua Franca (ELF) context over the past five years (Xia, 2021).

Realising that the available ELT materials have not been effectively addressing the teaching and learning of CSs, there is a need for curriculum developers and materials designers to develop and design curriculum syllabuses and materials that explicitly

highlight effective CS training in the ELT materials. Not only that, they should also incorporate the teaching of digital CS. In my opinion, more effective traditional and especially digital CSs should be highlighted in the curriculum syllabuses as they are useful in real-life communication to language speakers. As my finding suggests, language learners today use mobile devices as one of their CSs. Thus, it is anticipated that this outcome could be used by curriculum developers and materials designers to develop and design curriculum syllabuses and materials that address the use of this digital CS in daily communication. By incorporation of these strategies into the syllabus, I consider that language learners could gain sufficient knowledge of these CSs through communicative lessons in the classrooms. In my opinion, if included in English communicative syllabus and materials, learners can learn first-hand about the effective use of these CSs through classroom engagement. For example, they can discover how to critically analyse and filter Internet resources using their mobile devices, thus extending their knowledge repertoires within any topic of interest.

Thus, syllabuses and materials that include these major forms of CSs may, in my opinion, prepare learners to communicate efficiently in real-life communication. This would also afford them confidence in selecting and implementing suitable CSs in their everyday communication once they have obtained the inputs from the lessons addressing these two types of CSs, the traditional and digital. In addition, curriculum developers and designers may consider the factors and functions of influencing CSs which emerged from my data to be important elements when designing and developing the curriculum. This is because these elements can influence learners' use of CSs in communication, and failure to address such factors and functions in the creation of a curriculum and the associated materials will lead to ineffective communicative lessons in the classroom environment. Curriculum developers and material designers may also

use this study's final outcome, which addresses the positive and negative consequences of using mobile devices as CSs in communication to design and develop lessons that can improve learners' CSs in communication.

Returning to the literature, studies of CSs have made a significant contribution to second-language acquisition, and this field of research has evolved gradually since Selinker coined the term 'Strategies of Second Language Communication' in 1972. In learning about the strategic language use of learners, researchers conducted studies concentrating on this dimension, leading to more CS studies focusing on the nature of CSs, strategic language device taxonomies, CSs variations in communication, and CSs teachability (Dörnyei & Scott, 1997). Notwithstanding the accumulated CS literature, it seems to have little direct relevance to my present research, which discusses mobile devices as CSs. For this reason, my study may make a contribution as a basis for further research on the use of mobile devices as one of the CSs among language learners in communication. I also suggest that researchers conduct CSs studies using the quasi-natural CS elicitation research approach that I introduced in my research, bearing in mind that laboratory research, whilst more controllable, does not reflect real-life usage of digital devices in communication. Indeed, it would give me great pleasure if researchers were to explore CSs through this approach, as I believe more interesting findings concerning digital CSs would be discovered, thereby contributing further knowledge to this field.

As described in these chapters, I commenced utilising the strategic competence by Canale (1983) as a foundational concept in discussing communication strategies in communication for the present study. However, as I later made progress in my research, I found that the concept of strategic competence by Canale (1983) seemed to partially

relevant to my participants' current CSs practices, which comprised multiple digital modes such as Google Search, Google Images, and Apps. Therefore, I recommend that researchers study CSs from the multimodal perspective so as to gain further understanding of how language learners use digital CSs in communication. I have also discussed using Dörnyei and Scott (1997) CS taxonomy as guidance in analysing my research data. Nevertheless, to some degree, this taxonomy was unable to account for the newly discovered CSs obtained from my participants, so I developed a new taxonomy that matched my research data. My taxonomy, consisting of traditional and digital CSs, seems to be more comprehensive than previous CS taxonomies and could perhaps be used as a framework by researchers to analyse CSs in their subsequent research.

I also included the notion of pragmatics in the present study. In general, pragmatics is about understanding the meanings produced by speakers through interactions that are influenced by contextual variables. Knowing this, it is impossible not to include the concept of pragmatics in the present study as it comprehensively describes communication, and which is the focus of my study. Having the pragmatic concept in my thesis, though not a major underpinning theory, helps me comprehensively understand and discuss my participants' language functions. This is because pragmatic competence is interconnected with strategic competence (Uso'-Juan & Martinez-Flor, 2006). To my knowledge, relatively few CS studies have incorporated the concept of pragmatics (Sato, et al., 2019). Thus, I suggest that future research should incorporate this notion and study its connection with communication strategies to gain a detailed understanding of CSs, and indeed communication in general.

I also recommend that researchers undertake further qualitative studies so that an in-depth knowledge of the use of CSs can be gained and thus provide more information in this area. Finally, researchers might further explore the factors and functions behind the use of CSs among language speakers in communication, whilst at the same time paying considerable attention to the effects of using mobile devices as one of the CSs during interaction.

In conclusion, I hope that the findings of the current study will be found to be useful to many – those who are language speakers, educators, curriculum developers, and material designers, as well as those who conduct research.

6.4 Limitations of the Study

There are limitations to all research studies (Price & Murnan, 2004; Ross & Zaidi, 2019) and mine is no exception. My study's first limitation is that the participants recruited were all proficient English language speakers. As I described in the chapter on methodology, I decided to recruit speakers with good English proficiency as I believed that this group of learners would be able to respond appropriately to the tasks provided, and eloquently express their thoughts about the CSs adopted in communication. However, future studies could replicate this research with participants of different levels of English proficiency, which may yield different results. Secondly, my study was undertaken among English language speakers of various nationalities from the same university. I chose this university because I had the benefit of good access to it. However, utilising participants from multiple universities would be useful for future research, as a unique variation in terms of CSs usage and patterns may be discovered from the participants of different universities, adding richness to the field of CSs. Future research may also concentrate on exploring the use of CSs among

participants from various socio-economic and educational backgrounds in different contexts (e.g., workplaces) to obtain variation in data.

Overall, I was pleased with my data collection methods, these being mainly observations and interviews. Nevertheless, in my opinion, it would be useful for future research to include another method, namely the use of an online or offline diary/journal. Through this method, participants may write their experiences of using CSs in their daily lives and thus provide a further understanding of the studied phenomenon - the use of traditional and digital CSs in communication.

Another limitation of my study is that I only used some of the images obtained from my observations to support certain findings. In other words, the visual data I utilised in this study serves as a supplementary resource of information, as I only used them to illustrate some of my findings; thus, they play a minor role in comparison to the observations and interviews conducted in my research. Future researchers may use visual data as one of their primary methods for studying CSs to gain a more detailed picture of CSs' usage in communication among language speakers.

As seen in my thesis, I included a brief discussion about autonomous learning, specifically on personal autonomy by Benson (1996) and the sociocultural theory, particularly on the influence of cultural artefacts in human interaction by Vygotsky (1978). These theories were explained as a result of my data findings: autonomous communicator and collaboration. Even though I only included a brief discussion of these two concepts, I believe it was sufficient to discuss my thesis's emergent findings. Nonetheless, I recommend that those who want to research digital CSs specifically include and comprehensively discuss the above as underpinning theories to obtain a thorough understanding of digital CSs in communication.

Notwithstanding these limitations, the findings provide valuable insights into the use of CSs among English language speakers of different nationalities in daily communication.

6.5 Direction for Future Studies

Based on the review of the literature in combination with the analysis and research findings of this study, it is clear that communication strategies are an important competency that should be attained by language speakers, and that thus deserves attention from CS researchers. Therefore, they should potentially carry out more research studies concerning the use of CSs among language speakers to gain a comprehensive picture of CSs usage in communication among this particular group.

First, pertaining to CS taxonomy, the multimodal communication taxonomy emerged from my study can potentially be used as a basis for future researchers in exploring multimodal CSs, and it is hoped that this CS taxonomy would be further refined by them so that an inclusive taxonomy of CS could be produced and a better understanding about communication strategies among language learners could be attained.

Second, this study has revealed different CS factors that might influence the choice and type of communication strategies in communication among participants. Among all, I have addressed a few CS factors that have previously been overlooked and underexplored in CS studies, such as the familiarity between speakers and the physical context. Thus, these two CS factors, in my opinion, should be further explored by future researchers to gain a more in-depth understanding of these two elements in communication strategies, and indeed in communication in general. Moreover, I have also determined mobile devices properties to be CS factors, which I considered

interesting for the present study. This particular CS factor also deserves further attention by researchers as such CS factors are still relatively new in the field of CS, and exploration of such may expand the CS literature considerably.

Third, this study has shown the occurrence of various functions of CSs among the participants and it would be interesting for future researchers to come up with a proper framework to categorise these multiple CS functions in future studies. Fourth, the possible effects of mobile devices as a CS has also been presented in this study and it is hoped that future researchers will further investigate the multimodal communication strategies in the face-to-face context, the phenomenon of silence in interaction, and collaboration to expand CS literature.

Finally, based on my findings, I have thought of some interesting topics that can be considered by CS researchers focusing on language learners. These are 1) the correlation between learners' strategic competence and pragmatic competence; 2) the effects of mobile devices' characteristics on language learners' communication strategies; 3) the exploration of communication strategy functions among language learners; and 4) the learners' communication strategies in other communication discourse (i.e., written communication) in different languages and nationalities. Some of these proposed research topics may have already been explored in different educational and cultural contexts but, to my knowledge, little CSs research in the Malaysian ESL context has been carried out pertaining to these suggested research directions. Thus, I believe that future studies on these topics may yield valuable insights in the field of CSs and thus enhancing the quality of CSs in the teaching and learning for Malaysian ESL contexts.

6.6 Personal Reflection

Bias, a concept which originated from the quantitative research framework, can generally be interpreted as any influence that distorts a study's findings (Polit & Beck, 2014). This notion, as argued by qualitative researchers, is inconsistent with the philosophical underpinnings of qualitative inquiry (Thorne, et al., 2016). Rather, they typically agree that concepts such as rigour and trustworthiness are more important to the reflexive, subjective nature of qualitative research (Galdas, 2017). However, in spite of much explanation of the aforementioned concepts offered by qualitative scholars in qualitative studies (Kalu, 2019; Ratner, 2002), many scholars still continue to criticise qualitative researchers for lacking objectivity, as they are claimed to be motivated by their subjective roles during the research, which at the same time could be skewed by personal bias (Yin, 2009). Others, like Robson (2011), however, have defended the qualitative research stance by noting that bias occurs in all kinds of research studies which involve the study of people. In addition, I also believe that having bias is naturally a part of being human, and therefore it is impossible not to include it in pursuing any research study. Nevertheless, Merriam (2002) and Hatch (2002) suggested that qualitative researchers should recognise and carefully monitor their biases and be aware of how they may impact and influence their data collection and analysis, via self-reflection or reflexivity.

By being reflexive, qualitative researchers may limit the degree to which their biases influence their studies (Johnson & Christensen, 2004). Therefore, I decided to set down my personal reflections to mitigate any potential bias that might have arisen during my research project. Watt (2007) claimed that reflexivity promotes the comprehension of the study phenomenon and helps to clarify the whole research process for anyone new to the field. Thus, this statement suggests that it is deemed appropriate

for qualitative researchers to include personal reflections in research reports. Also, a further reason for including personal reflection in this final chapter is because I agree with Wellington (2015), who argued that reflections should be presented in research reports and made public.

I explained my personal background in the first chapter, which influenced my work. Here, on the other hand, in this section, I consider my reflections during my entire research process from the beginning till the end. By doing so, I revisit and reflect on my PhD journey, and thus am able to understand and create an overall picture of it. It should be noted, though, I have been reflective during my entire research process from the very beginning.

In the first chapter, I addressed my personal experiences as an English language learner who faced problems communicating with native English speakers abroad. I also talked about my experiences in managing my learners with English communication difficulties when I was a teacher back home in Malaysia. Likewise, I noted my experiences living in a non-English language country, Germany, which was my biggest push factor for using my mobile devices to interact with locals. All these experiences I encountered have led to my current research project, which has focused on the use of CSs in English communication. However, before I commenced writing my confirmation review paper, I recalled discussing my research topic numerous times with my supervisor. He suggested that I read around CSs and mobile learning to understand this area. From there, I began digging for information about the origins of CSs and the use of these means in English communication. I sought applied linguistics and second language acquisition (SLA) journals to obtain appropriate literature on my research area, and later I discovered that this field has been the centre of attention among

researchers since the 1970s. My analysis of the literature revealed that there have been plenty of CSs studies conducted face-to-face in laboratory settings since the 1970s (Haastrup & Phillipson, 1983; Ismail & Kaur, 2012; Uglá, et al., 2019; Uztosun & Erten, 2014).

From my reading, I also discovered that the trend of CS studies changed slightly from the 1990s, when technologies began to penetrate every aspect of human lives. I found more CS studies being performed in the computer-mediated communication context (CMC) since the 1990s. I believe that more CSs studies were undertaken in this context starting in the 1990s as researchers were perhaps keen to explore how technologies influenced the use of CSs among language learners in communication. As I presented in the earlier chapter, researchers carried out CS studies within synchronous and asynchronous CMC using desktops in laboratory settings (e.g., Hung & Higgins, 2016; Omar, et al., 2012; Smith, 2003; Wang, 2013). Some of these researchers even performed CS studies in virtual environments (e.g., Gowans, 2011; Shih, 2014) to explore how learners communicate and overcome their English language communication difficulties within this context. The findings from these studies revealed that English language learners used strategies that I later termed digital CSs in the present study. Bearing in mind that mobile devices also come with the CMC environment, I then sought to explore CS studies connected to mobile devices. However, a thorough search of the relevant literature yielded only three studies pertaining to CSs and mobile devices, those by Cheng and Lu (2016), Sulaiman, et al. (2018), and Fang, et al. (2018). The first two CS studies explored the use of CSs in an Mlearning environment, while the latter concentrated on the effects of using a mobile application peer feedback system, as installed on mobile phones, on language learners' overall communication and CSs. Even though these studies combined both mobile

devices and CSs, they still did not match my study that explored the use of CSs including mobile devices as a CS by communicators in communication. Thus, the current study will have hopefully expanded the CS literature.

It was undeniably quite a surprise to learn that studies on mobile devices in the area of CSs are rare, despite knowing that this tool is already a part of our everyday lives and has radically changed the way we communicate. Yes, studies related to mobile devices exist, but the majority revolve around vocabulary and language learning (e.g., Chen, 2013; Dashtestani, 2016; Deng & Trainin, 2015; Metruk, 2021) rather than communication strategies. The lack of research concerning the use of mobile devices as a CS in communication indicates that there remains considerable room for exploration and improvements in this particular field. Not only that, but such a condition also gives researchers the opportunity to be creative and further explore mobile devices' affordances in CSs studies, with this study being one of them. Hopefully, more CS researchers will undertake studies on the use of mobile devices as CSs so that an in-depth knowledge of this current phenomenon can be obtained, considering that people are now using digital CSs in communication. Having explained my reflections on the CS research studies, I next discuss my other experiences related to my present work.

Initially, I was not familiar with qualitative studies until I conducted my research. Since I thus had little knowledge of that form of study, I had to read about and discuss this research approach extensively with my colleagues. To be honest, it was a challenging task, but worth it as I now have sufficient information about qualitative studies. The reason why I was not familiar with this research design is that, back in Malaysia, throughout my experience as a student in a university there, quantitative studies were preferred more than qualitative studies as the former are considered to be

more accurate provided that they come with statistical figures, while the latter offers words.

Besides, I also experienced conducting a pilot study for the first time during my PhD research. Via this pilot study, I was able to gain ample information prior to carrying out my actual research project. The pilot study seemed to be useful to me since I was able to obtain preliminary insights into the use of mobile devices as one of the CSs among the English language speakers of different nationalities which, to my knowledge, scarcely features in the literature. I also managed to determine feasible instructions for use in all the elicitation tasks, with some modifications being made to the chosen tasks. During my pilot research, I also checked my interview questions while gaining insights into conducting interview sessions. For the first time, in this study, I was able to use thematic analysis as guidance to analyse my data and use ATLAS.ti in the process of analysing and sorting the data I had collected. I have also learned to be analytical when analysing my data, while reading other researchers' journal articles, and when discussing my data findings.

Overall, for me, the entire PhD process was indeed a challenging event, but all the experiences gained from this journey were positive and constructive as it offered me the necessary knowledge to properly conduct qualitative research.

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APPENDIX A: THE UNIVERSITY OF SHEFFIELD ETHICS APPROVAL



Downloaded: 24/07/2015
Approved: 20/07/2015

Faten Najwa Binti Zamani
Registration number: 130249676
School of Education
Programme: PhD in Education

Dear Faten Najwa

PROJECT TITLE: Language Communication Strategies (CS) in the Digital Age
APPLICATION: Reference Number 003756

On behalf of the University ethics reviewers who reviewed your project, I am pleased to inform you that on 20/07/2015 the above-named project was **approved** on ethics grounds, on the basis that you will adhere to the following documentation that you submitted for ethics review:

- University research ethics application form 003756 (dated 23/06/2015).
- Participant information sheet 1009702 version 2 (23/06/2015).
- Participant consent form 1009682 version 4 (23/06/2015).

If during the course of the project you need to [deviate significantly from the above-approved documentation](#) please inform me since written approval will be required.

Yours sincerely

Professor Daniel Goodley
Ethics Administrator
School of Education

APPENDIX B: THE INSTITUTIONAL PERMISSION LETTER TO CONDUCT RESEARCH

03/2015

University of Sheffield Mail - Permission to Conduct Research



Faten Najwa Binti Zamani <fbintizamani1@sheffield.ac.uk>

Permission to Conduct Research

3 messages

Farhana binti Abdul Wahab <farhana@uum.edu.my>
To: "fbintizamani1@sheffield.ac.uk" <fbintizamani1@sheffield.ac.uk>
Cc: Rahimah Bt Saad <rahimah@uum.edu.my>

12 August 2015 at 08:50

Assalamualaikum Wrt. Wbt

Dear madam,

May I refer to your mail, dated 6 August 2015.

Please be informed that the University has no objections for you to conduct the research among the students mentioned in the letter.

Thank you.

Best regards,

FARHANA ABDUL WAHAB
Senior Assistant Registrar
Department of Academic Affairs
Universiti Utara Malaysia

APPENDIX C: PARTICIPANT INFORMATION SHEET



The
University
Of
Sheffield.

Participant Information Sheet

‘Communication Strategies in the Digital Age’

You are being invited to take part in a research project. Before you decide it is important for you to understand why the research is being done and what it would involve. Please take time to read the following information carefully and feel free to ask me if you would like more information or if there is anything that you do not understand. Thank you for reading this.

What is the purpose of the research?

The purpose of this research is to explore

- 1) interactions between Malay ESL speakers and speakers of English of other nationalities.
- 2) the communication strategies used by both Malay ESL speakers and speakers of English of other nationalities in the elicitation tasks.

Do I have to take part?

It is up to you to decide whether or not to take part. If you decide to take part you will be given this information sheet to keep (and be asked to sign a consent form) and you can still withdraw at any time without it affecting any benefits that you are entitled to in any way. You do not have to give a reason. If you decided to withdraw at any time, results up to the period of withdrawal may be used if you are happy for this to be done. Otherwise, they will be deleted and no further use will be made of them.

What will I do if I take part?

If you are happy to participate in the research, I will ask you to read this information sheet, sign the consent form and complete the demographic questionnaires prior to the study. Then, you would need to follow the procedures of the research, as mentioned below:

1) Elicitation Tasks

- a) Malay ESL speakers will be paired with speakers of English of other nationalities in three elicitation tasks which will take approximately 60 minutes.

The interactions will be video recorded.

2) Interviews

a) Malay ESL speakers and speakers of English of different nationalities will be assigned for 30 minutes of dyadic interview upon completing the tasks. The interview will be audio-recorded.

What are the possible benefits of taking part?

Whilst there may be no personal benefits to your participation in the study, the information you provide may contribute to the future development of communication strategies studies.

Will my taking part in this study be kept confidential?

The data will be stored safely in a password-protected database, and none of them will be labelled or identified in any way with your name. Data can be a valuable resource for future studies; therefore, I ask your consent to maintain it. Again, we stress that all information is kept confidential and will only be used for research purposes.

What will happen to the results of the research study?

The findings of the study will be presented in my thesis, and a copy of my thesis will be submitted to the School of Education. The summary of the findings are available for the participants if requested. The results of my research study will also be used for other scholarly purposes.

What if something goes wrong?

If you are unhappy, or if there is a problem that happens within the project, please feel free to let me know by contacting Faten Najwa Zamani at fbntizamani1@sheffield.ac.uk , contact no: +6103-5841334/whatsapp:+447510498314 or my supervisor, Dr Mark Payne mark.payne@sheffield.ac.uk

If you choose to participate, thank you very much, and you can contact me at any time with any questions:

Faten Najwa Zamani
PhD researcher
School of Education
The University of Sheffield
Email: fbntizamani1@sheffield.ac.uk

Contact No: +6013-5841334/ Whatsapp +447510498314

APPENDIX D: DEMOGRAPHIC BACKGROUND QUESTIONNAIRE

Demographic Background Questionnaire

This Demographic Background Questionnaire aims to gather some useful information about the participants of this study. The questionnaire consists of four sections: Personal Information, Language Background, Mobile Devices Ownership and Internet Usage. You are required to answer all the questions. All information you provide will be kept strictly confidential and anonymous.

Borang Soal Selidik Demografi ini bertujuan untuk mengumpulkan maklumat penting peserta kajian. Borang soal selidik ini terbahagi kepada empat bahagian: Maklumat peribadi, Latar belakang Bahasa, Maklumat Penggunaan Peranti Mudah Alih dan Penggunaan Internet. Anda dikehendaki untuk menjawab semua soalan yang tertera. Semua maklumat yang diberikan akan dirahsiakan

1. Section 1: Personal Information/Maklumat Peribadi

Age/Umur

Mark only one oval.

19-24

25-30

30 and above

2. Gender/Jantina

3. *Nationality/Warganegara

4. *Phone number/No.telefon

5. *Email/Emel

6. Section 2: Language Background/ Latar belakang Bahasa

First language/ Bahasa Ibunda

7. Second language/ Bahasa Kedua

8. Others/Lain-lain

9. How long have you been learning English? Berapa lamakah tempoh anda belajar Bahasa Inggeris?

10. Do you use English outside of the classroom? Adakah anda menggunakan Bahasa Inggeris di luar waktu pembelajaran?

12. How proficient are you in using English to communicate? Sejauh manakah tahap kemahiran anda berkomunikasi dalam Bahasa Inggeris?

Mark only one oval.

Very proficient/Sangat mahir Fairly proficient/Agak mahir Proficient/Mahir

Less proficient/Kurang mahir Not proficient/Tidak mahir

Section 3: Mobile Devices Information/Maklumat Penggunaan Peranti Mudah Alih

13. *Do you own mobile devices? Adakah anda mempunyai alat peranti mudah alih?

14. *What types of mobile devices are you using? (e.g. smart phone/tablet and etc.)
Apakah jenis peranti mudah alih yang anda gunakan? (e.g. telefon pintar/ tablet dan lain-lain)

15. How important are your mobile devices to you? Sejauh mana pentingnya peranti mudah alih kepada anda?

Mark only one oval.

Extremely important/ Amat penting Very important/Sangat penting Fairly important/
Agak penting

Not important/Tidak penting

16. What do you use your mobile devices for? Apakah kegunaan peranti mudah alih anda?

17. *Are you using any mobile apps? If yes, please name the mobile apps you use below: Adakah anda ada menggunakan aplikasi mudah alih? Jika ya, sila nyatakan aplikasi mudah alih tersebut di bawah:

18. Section 4: Internet Usage/Penggunaan Internet

How do you connect to internet? Please tick any of the options below. Bagaimana anda mendapatkan capaian Internet? Sila tanda mana-mana pilihan di bawah:

Tick all that apply.

Home broadband internet/ Jalur lebar kediaman Mobile data internet/ Pelan data internet telefon pintar Free-Wifi/Wifi Percuma

Personal hotspot/Hotspot persendirian

19. Where do you usually online? Please list down the places below. Di mana anda selalu mendapat capaian internet? Sila nyatakan tempat-tempat tersebut di bawah:

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APPENDIX E: PARTICIPANT CONSENT FORM

Title of Research Project: Communication Strategies in the Digital Age

Name of Researcher: Faten Najwa Zamani

Participant Identification Number for this project:

Please initial the box

1. I confirm that I have read and understand the information sheet/ dated [_____] explaining the above research project and I have had the opportunity to ask questions about the project.
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences.
3. I understand that my responses will be kept strictly confidential. I understand that my name will not be linked with the research materials, and I will not be identified or identifiable in the report or reports that result from the research.
4. I agree for the interactions during the elicitation tasks being video recorded.
5. I agree for the data collected from me to be used for research purposes.
6. I agree for the interviews being audio recorded.
7. I agree to take part in the above research project.

Name of Participant

Date

Signature

Name of person taking consent

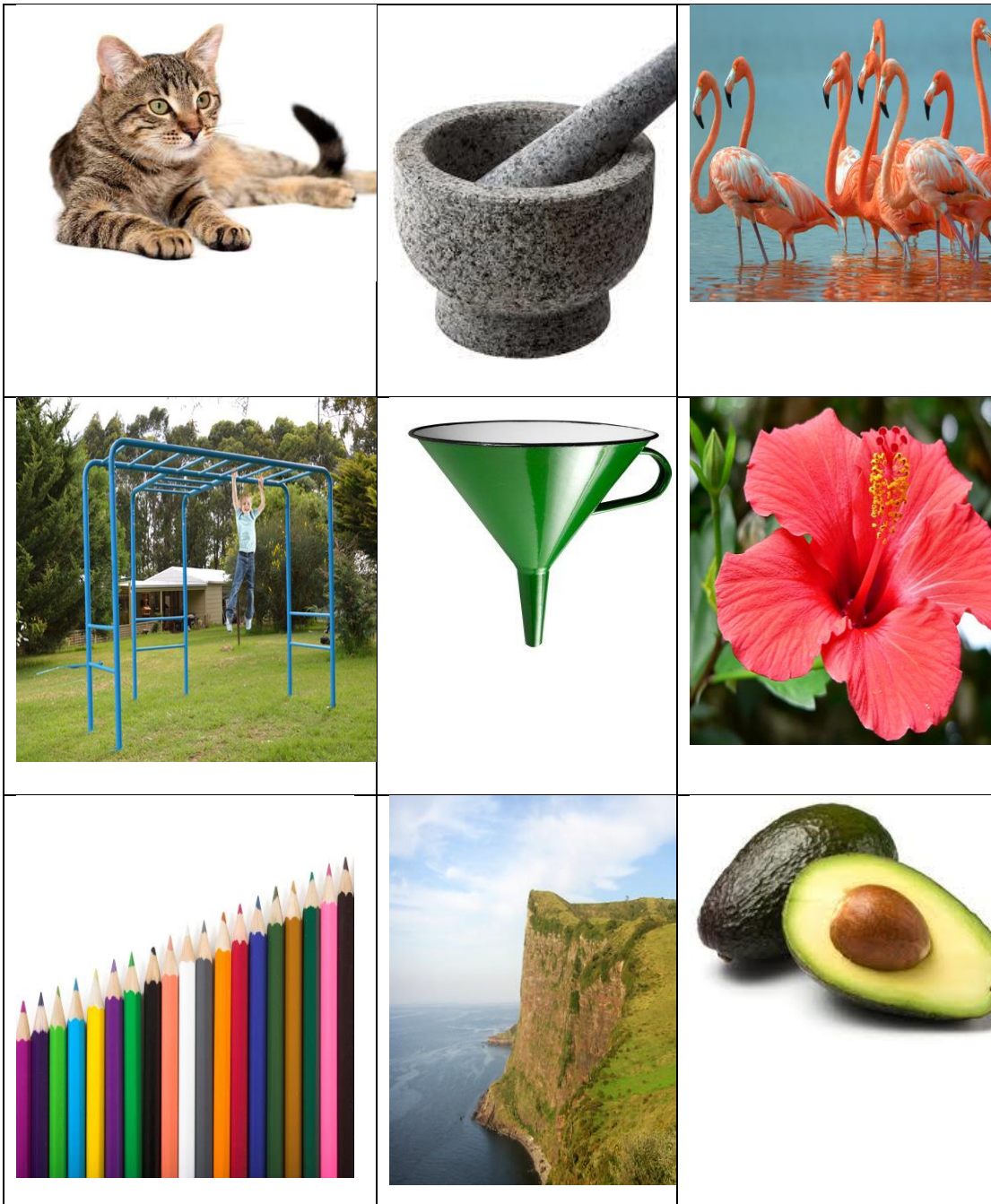
Date

Signature






To be signed and dated in presence of the participant

Once this has been signed by all parties you will receive a copy of the signed and dated participant consent form, the letter/pre-written script/information sheet.

APPENDIX F: OBJECT DESCRIPTION TASK



APPENDIX G: PICTURE – SEQUENCE TASK

		
		<ol style="list-style-type: none">1. Eggs2. Tadpole3. Tadpole with legs4. Froglet5. Frog

APPENDIX H: ROLE-PLAY TASK

Role-play 1: Lunch at a friend's house

Role A: Guest

Role B: Host

Role A

You are visiting a friend of yours at their house for lunch. During the lunch, you are served a Malaysian dessert called *cendol*, prepared by your friend, which you have never tasted before. Start a conversation with your friend and ask him/her about how to prepare *cendol*.

Role B

You invite a friend for lunch. He/She really like the Malaysian dessert, *cendol*, prepared by you. You are very pleased to know that he/she enjoyed the dessert. During your conversation with him/her at lunchtime, he/she has asked you the steps and ingredients needed to prepare the dessert.

Role- play 2: Holiday in Munich

You and your friend visited Munich for a holiday. On the last day there, both of you need to decide on one place to visit before flying back home the next day. These two places are Neuschwanstein *Castle* or the *BMW Museum*. Please discuss the place you want to visit (refers to the photo given) and persuade him/her to visit the place with you.



APPENDIX I: INTERVIEW QUESTIONS

Did you have any difficulties when communicating to your partner?

1. If so, What was the problem?
2. How did you solve that problem?
3. Do you think that the solution was effective for your partner to understand your message?
4. On those occasions where you were not able to solve the problem, what did you do?
5. Did you have any difficulties to understand your partner's message?
6. Can you recognise any thing you did to try to understand your partner's message?
7. Do you feel there was any difference when interacting with a different interlocutor?
8. Were there any times when you expected your partner to help you?

APPENDIX J: DÖRNYEI AND SCOTT'S (1997) TAXONOMY

Dörnyei and Scott's communication strategy taxonomy (1997, p.188-194)

STRATEGY	DESCRIPTION	EXAMPLE
1.Message abandonment	Leaving a message unfinished because of some language difficulty	<i>It is a person er... who is responsible for a house, for the block of house... I don't know... [laughter]</i>
2.Message reduction (topic avoidance)	Reducing the message by avoiding certain language structures or topics considered problematic language-wise or by leaving out some intended elements for a lack of linguistic resources	[Retrospective comment by the speaker:] <i>I was looking for "satisfied with a good job, pleasantly tired," and so on, but instead I accepted less</i>
3.Message replacement	Substituting the original message with a new one because of not feeling capable of executing it	[Retrospective comment after saying that the pipe was broken <i>in the middle</i> instead of "the screw thread was broken":] <i>I didn't know "screw thread" and well, I had to say something</i>
4.Circumlocution (paraphrase)	Exemplifying, illustrating or describing the properties of the target object or action	<i>it becomes water</i> instead of "melt"
5.Approximation	Using a single alternative lexical item, such as a superordinate or a related term, which shares semantic features with the target word or structure	<i>plate</i> instead of "bowl"
6.Use of all- purpose words	Extending a general, "empty" lexical item to contexts where specific words are lacking	The overuse of <i>thing, stuff, make, do</i> , as well as words like <i>thingie, what-do-you-call-it</i> ; e.g.: <i>I can't work until you repair my ... thing</i>
7.Wordcoinage	Creating a non-existing L2 word by applying a supposed L2 rule to an existing L2 word	[Retrospective comment after using <i>dejunktion</i> and <i>unjunktion</i> for "street clearing":] <i>I think I approached it in a very scientific way: from 'junk' I formed a noun and I tried to add the negative prefix "de-"; to "unjunk" is to 'clear the junk' and "unjunktion" is 'street clearing'</i>

8.Restricturing	Abandoning the execution of a verbal plan because of language difficulties, leaving the utterance unfinished, and communicating the intended message according to an alternative plan	On Mickey's face we can see the... so he's he's wondering.
9.Literal translation (transfer)	Translating literally a lexical item, an idiom, a compound word or structure from L1/L3 to L2	I'd made a big fault [translated from French]
10.Foreignising	Using a L1/L3 word by adjusting it to L2 phonology (i.e., with a L2 pronunciation) and/or morphology	reparate for "repair" [adjusting the German word 'reparieren']
11.Code switching (language switch)	Including L1/L3 words with L1/L3 pronunciation in L2 speech; this may involve stretches of discourse ranging from single words to whole chunks and even complete Turns	Using the Latin ferrum for "iron"
12.Use of Similar sounding words	Compensating for a lexical item whose form the speaker is unsure of with a word (either existing or non-existing) which sounds more or less like the target item	[Retrospective comment explaining why the speaker used cap instead of "pan":] Because it was similar to the word which I wanted to say: "pan"
13.Mumbling	Swallowing or muttering inaudibly a word (or part of a word) whose correct form the speaker is uncertain about	And uh well Mickey Mouse looks surprise or sort of XXX [the 'sort of' marker indicates that the unintelligible part is not just a mere recording failure but a strategy]
14.Omission	Leaving a gap when not knowing a word and carrying on as if it had been said	then... er... the sun is... hm sun is... and the Mickey Mouse.... [Retrospective comment: I didn't know what 'shine' was.]
15.Retrieval	In an attempt to retrieve a lexical item saying a series of incomplete or wrong forms or structures before reaching the optimal form	It's brake er... it's broken broked broke

16a.Self-repair	Making self-initiated corrections in one's own speech	then the sun shines and the weather get be... gets better
16b.Other repair	Correcting something in the interlocutor's speech	Speaker:... because our tip went wrong... [...] Interlocutor: Oh, you mean the tap. S: Tap, tap...
17.Selfrephrasing	Repeating a term, but not quite as it is, but by adding something or using paraphrase	I don't know the material...what it's made of...
18.Over-explicitness (waffling)	Using more words to achieve a particular communicative goal than what is considered normal in similar L1 situations	(This CS was not included in Dörnyei & Scott's, 1995, taxonomy)
19.Mime (nonlinguistic/paralinguistic strategies)	Describing whole concepts nonverbally, or accompanying a verbal strategy with a visual illustration	[Retrospective comment:] I was miming here, to put it out in front of the house, because I couldn't remember the word
20.Use of fillers	Using gambits to fill pauses, to stall, and to gain time in order to keep the communication channel open and maintain discourse at times of difficulty	Examples range from very short structures such as well; you know; actually; okay, to longer phrases such as this is rather difficult to explain; well, actually, it's a good question
21a.Self repetition	Repeating a word or a string of words immediately after they were said	[Retrospective comment:] I wanted to say that it was made of concrete, but I didn't know 'concrete' and this is why "which was made, which was made" was said twice
21b.Other repetition	Repeating something the interlocutor said to gain time	Interlocutor: And could you tell me the diameter of the pipe? The diameter. Speaker: The diameter? It's about er... maybe er... five centimeters.

22. Feigning understanding	Making an attempt to carry on the conversation in spite of not understanding something by pretending to understand	Interlocutor: Do you have the rubber washer? Speaker: The rubber washer? ... No I don't. [Retrospective comment: I didn't know the meaning of the word, and finally I managed to say I had no such thing.]
23. Verbal strategy markers	Using verbal marking phrases before or after a strategy to signal that the word or structure does not carry the intended meaning perfectly in the L2 code	E.g.: (strategy markers in bold): (a) marking a circumlocution: On the next picture... I don't really know what's it called in English... it's uh this kind of bird that... that can be found in a clock that strikes out or [laughs] comes out when the clock strikes
24a. Direct appeal for help	Turning to the interlocutor for assistance by asking an explicit question concerning a gap in one's L2 knowledge	it's a kind of old clock so when it 258truck ser... I don't know, one, two, or three 'clock then a bird is coming out. What's the name
24b. Indirect appeal for help	Trying to elicit help from the interlocutor indirectly by expressing lack of a needed L2 item either verbally or Nonverbally	I don't know the name... [rising intonation, pause, eye contact]
25. Asking for repetition	Requesting repetition when not hearing or understanding something properly	Pardon? What?
26. Asking for clarification	Requesting explanation of an unfamiliar meaning structure	What do you mean?, You saw what? Also 'question repeats,' that is, echoing a word or a structure with a question intonation
27. Asking for confirmation	Requesting confirmation that one heard or understood something correctly	Repeating the trigger in a 'question repeat' or asking a full question, such as You said...?, You mean...?, Do you

		mean...?
28. Guessing	Guessing is similar to a confirmation request but the latter implies a greater degree of certainty regarding the key word, whereas guessing involves real indecision	E.g.: Oh. It is then not the washing machine. Is it a sink?
29. Expressing non-understanding	Expressing that one did not understand something properly either verbally or nonverbally	Interlocutor: What is the diameter of the pipe? Speaker: The diameter? I: The diameter. S: I don't know this thing.
30. Interpretive summary	Extended paraphrase of the interlocutor's message to check that the speaker has understood correctly	So the pipe is broken, basically, and you don't know what to do with it, right?
31. Comprehension check	Asking questions to check that the interlocutor can follow you	And what is the diameter of the pipe? The diameter. Do you know what the diameter is?
32. Own-accuracy check	Checking that what you said was correct by asking a concrete question or repeating a word with a question intonation	I can see a huge snow... snowman? Snowman in the garden
33a. Response: repeat	Repeating the original trigger or the suggested corrected form (after an other-repair)	
33b. Response: repair	Providing other-initiated self-repair	Speaker: The water was not able to get up and I... Interlocutor: Get up? Where? S: Get down
33c. Response: rephrase	Rephrasing the trigger	Interlocutor: And do you happen to know if you have the rubber washer? Speaker: Pardon? I: The rubber washer... it's the thing which is in the pipe
33d. Response: expand	Putting the problem word/issue into a larger context	Interlocutor: Do you know maybe er what the diameter of the pipe is? Speaker: Pardon? I: Diameter, this is er maybe you learnt

		mathematics and you sign er with th this part of things
33e.Response: confirm	Confirming what the interlocutor has said or suggested	Interlocutor: Uh, you mean under the sink, the pipe? For the... Speaker: Yes. Yes.
33f.Response: reject	Rejecting what the interlocutor has said or suggested without offering an alternative solution	Interlocutor: Is it plastic? Speaker: No

APPENDIX K: DÖRNYEI & SCOTT'S CS TAXONOMY (1997) CHECKLIST

DIRECT STRATEGIES

*Resource deficit-related strategies	Task 1	Task 2	Task 3
Message abandonment			
Message reduction			
Message replacement			
Circumlocution			
Approximation			
Use of all purpose words			
Word coinage			
Restructuring			
Literal Translation			
Foreignizing			
Code switching			
Use of similar sounding words			
Mumbling			
Omission			
Retrieval			
Mime			
*Own-performance – related strategies			
Self rephrasing			
Self repair			
*Other performance related strategies			
Other repair			

INTERACTIONAL STRATEGIES

	Task 1	Task 2	Task 3
*Resource deficit related strategies			
Appeals for help			
*Own-performance related strategies			
Comprehension check			
Own accuracy check			
*Other performance related strategies			
Asking for repetitions			
Asking for clarifications			
Asking for confirmation			
Guessing			
Expressing non-understanding			
Interpretive summary			
Responses			

INDIRECT STRATEGIES

	Task 1	Task 2	Task 3
*Processing time-pressure related strategies			
Use of fillers			
Repetitions			
*Own performance related strategies			
Verbal strategy markers			
*Other performance related strategies			
Feigning understanding			

APPENDIX L: OBSERVATION NOTE TAKING

Task 1

Participants used different communication strategies to deliver messages. However, circumlocution and approximation were found to be employed the most by the participants.

According to the study conducted by circumlocution is used the most in object description tasks (citation) Examples of circumlocution used

Referred phones to look up for unknown words

Eg. translate a word from mother tongue to English

Shared mobile devices to assist each other in completing the tasks

Used gestures

Silence during interactions – why? Searched for information using mobile devices

Using mobile devices to assist interactions

Task 2 frog life cycle- refer to google to check for information (New CS)

Task 2- participants referred to mobile devices for accurate answers

Task 2 (rashaq and hasanah they didn't refer to mobile devices and the name of the stages given were wrong).

How? Google image

Why? Usman, I learned this in secondary school but I forgot the name the

For word description task, participants were having difficulties to describe abstract words

The use of mobile device not just helps to maintain the conversation but also gives both interlocutors accurate answers

Task 3

Frog life cycle

Participants refer

Example 1, Example 2

Teaching new types of CS e.g. the use of dictionaries, google images should be taught to the students

Using dictionary (first language) to English

Using mobile devices leads to accuracy as participants tend to search for the right word. Focus on form.

Participants are able to communicate in the tasks but they were not able to give the accurate answer. This highlights that the use of mobile devices as communication strategies not only help to maintain interactions but also leads to accuracy.

APPENDIX M: THEMES GENERATED FROM ATLAS.TI

DIAGRAM A: CS Functions

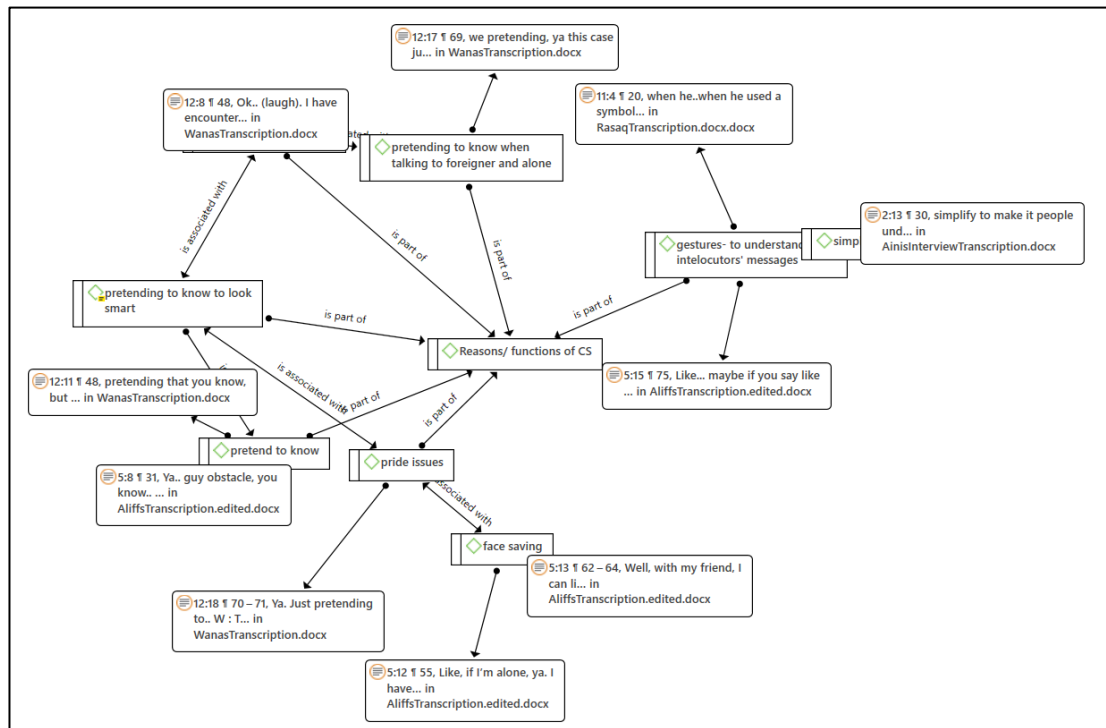


Diagram B: Mobile devices/Applications

