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Synchronous Mobile-Mediated Communication: An Analysis of Discourse Functions and the Nature of Negotiations

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Abstract

Negotiating meaning and form has an important role in the development of a language. At the same time, written and audio output may also vary, which can lead to the generation of a variety of discourse functions and materialize in teaching methodologies and academic content used in the language teaching process. Since technology is increasingly becoming an indispensable and integral educational tool across the world, Saudi Arabia being no exception, language teachers are encouraged to integrate new technologies into their teaching methodology and practice to ensure they meet learners' needs. WhatsApp Messenger, as a messaging and Voice over IP (VoIP) service that allows users to, among others, send text and voice messages and make voice and video calls, is investigated as a real-time language learning in this research. The current paper was conceived out of the researcher's consistent observation of the positive impact of synchronous audio and written mobile-mediated communication tools, in particular WhatsApp, and the nature of negotiating meaning and form on the development of English as a foreign language for ESL and EFL learners. There has been previous similar research on WhatsApp as an educational tool but, in these studies, the language outcomes have largely been neglected. By analyzing audio and text negotiations and interactions conducted over WhatsApp, and comparing them with equivalent asynchronous computer-based exchanges, this study aims to investigate different types of discourse functions that are used in the negotiation of meaning via synchronous mobile-mediated communication. On a micro level, we compare Synchronous Audio Mobile-Mediated Communication (SAMMC) and Synchronous Written Mobile-Mediated Communication (SWMMC) modes of interaction, when applying discourse functions, to determine which mode offers a greater range of innovative language output. The language output of forty undergraduate EFL learners was studied over a five-week period and it was concluded that SAMMC outperformed SWMMC in terms of the scope of meaning and form.

Keywords: Mobile-mediated communication; Discourse functions; Negotiation for meaning; Negotiation for form; WhatsApp as an MMC tool.

1. Introduction

Communication is the essence of language use and, in a technology-driven world, it has come to acquire new dimensions, with face-to-face communication steadily giving in/way to mediated communication where *technology* is the chosen interface working across time and space (David *et al.*, 1994). The grip technology-mediated communication holds on contemporary communication is so broad in range and fast-growing that, in terms of the volume in particular, it overshadows and outperforms all other media of information transfer. Mobile-Mediated Communication (MMC) is even more remarkable and unique in the sense that it enables users to mix speaking and writing and use slangs and word abbreviations much similar to every-day spoken language use. However, compared to verbal face-to-face communication, written mobile-mediated communication offers greater permanence and connectivity, with more structured syntax and denser lexis. Furthermore, whereas face-to-face communication depends on cues other than pure language content for the transmission of the message, technology-mediated communication involves fewer non-verbal cues, faculties, and symbols while, at the same time, ensuring greater privacy for the user, a factor that makes it even more desirable to learners in EFL contexts. In short, it brings in elements of dissociation and disinhibition, the absence of which stunt EFL learners' performance in a conventional setting. Park *et al.* (2012), believe that the reach of a communication medium depends on the popularity of its use, which they term *the network effect*. In EFL teaching in Saudi Arabia, it has been observed that being conscious of peers, and their 'presence', obstructs learners from participating constructively in communicative interactions. The *network effect* obliterates this inhibition as, figuratively speaking, all youngsters in this country are glued to the medium in question, the mobile device, all the time. MMC facilitates simple and effective coordination and information-sharing in an educational setting through factors such as the right optics, availability of the person and the tool, motivation to use, and situational flexibility. In environments where two or more users are engaged in MMC in real time (that is, at the same time but may or may not be in the same place), turn-taking and negotiation of form and meaning help create and facilitate communication.

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Recognizing the importance of learner needs and the urgency to be able to communicate in English, which is now the language that connects the world, Saudi Arabia has steadily steered her educational philosophy towards technological integration. In the new educational policy, introduced at the start of the year 2016 under the "National Transformation Program 2020", the administration pronounced its aim of 'seeking to develop students' general and basic skills and enable them to face *modern life requirements'*. This translates to improved infrastructure, adopting new approaches to teaching and, above all, preparing students to take on the role of global citizens. Teachers today can access the latest research in the field of educational technology and this increasing utilization and incorporation of modern technologies and their innovative use by teachers and learners have changed the nature of negotiations as well as discourse functions. However, there have not been any definitive conclusions on the language output that results from SAMMC and SWMMC, neither on different language negotiations prompted by the two. As teachers, our concern should be how to integrate the best medium into our curriculum and finding that method is one of the aims of this research. Furthermore, by providing learners with opportunities for online negotiation, this study investigates the effect of synchronous audio and written mobile-mediated communication on the types of discourse functions generated by EFL learners.

1.1. Statement of the Problem

Previous studies on synchronous mobile and computer-mediated communication (AbuSeileek and Rabab'ah, 2013; Darhower, 2002; Fitz, 2006; Kitade, 2000; Rouhshad *et al.*, 2016; Sauro and Smith, 2010; Sotillo, 2000; Yanguas, 2012) focused on investigating discourse functions and the negotiation of meaning either in synchronous written mobile or computer-mediated communication or in face-to-face (FTF) interaction. There are, however, very few studies that compare the nature of negotiations and types of discourse functions between FTF and computer-mediated communication. The present study focuses on the nature of discourse functions and negotiations across the synchronous audio and written mobile-mediated communication and tries to fill the existing gap in this field by examining audio and the written peer interaction on WhatsApp. It aspires to offer a new perspective on the impact of synchronous audio and written mobile-mediated communication on the types of discourse functions that could be utilized by administrators, teachers, learners, educators, and scholars in the field of ESL and EFL.

2. Literature Review
2.1. Discourse Functions in MMC

Several studies have investigated discourse functions via meaning negotiation either in face-to-face or Synchronous Written Computer-Mediated Communication (SWCMC) and analyzed EFL learners' interactive output. As early as 1981, Long and later in 1994, Pica pointed out the importance of the negotiation of meaning in language acquisition and concluded that negotiating meaning assisted in the understanding of input during interactional modifications to the organization and structure of communication. Long (1996), later asserted that negotiating for meaning and form assisted in second language acquisition (SLA) claiming that the opportunity for providing corrective feedback increased through negotiating for meaning. For Long (1996), the Interaction Approach represents the most effective method in the process of SLA. Warschauer (1997), also believes that with the advent of newer technologies, the focus has shifted to more student-cantered learning approaches. Sotillo (2000), examined the effect of asynchronous and synchronous computer-mediated communication and face-to-face interaction on discourse functions generated by ESL learners and observed that discourse functions generated in synchronous CMC were relatively the same as in face-to-face conversations. Sotillo (2000), later proposed CMC as a new tool that asynchronously and synchronously promotes language acquisition by encouraging learner communication and creating a collaborative context and e-communities for learners. Gass (2005), states a similar point when he emphasizes that interacting using the second language constitutes the basis for language development rather than a forum for practicing certain language features. Simpson (2005), investigated the discursive characteristics of interaction (i.e. coherence and cohesion in synchronous text-based CMC), collecting the data from the interaction between English learners and teachers in an online community. In his research, Darhower (2002) studied interactional and linguistic features of asynchronous CMC to describe how learners and instructors constructed the meaning through collaboration with each other. Fitz (2006), carried out a comparative study of synchronous text-based CMC and FTF interaction among advanced ESL learners. His findings indicated that ESL learners generated more discourse and greater lexical range due to their interactive competence in synchronous text-based CMC, compared to FTF interaction. AbuSeileek and Rabab'ah (2013), studied the effect of SCMC on discourse functions produced by EFL learners (males vs. females) in terms of the number of total words and the lexical range. Their findings indicated that the female participants generated more output discourse functions than males in the SCMC mode.

2.2. The Nature of Negotiations: Negotiating for Meaning and Form

Numerous studies on SLA have demonstrated that the negotiation of meaning offers learners a practical set of interaction techniques that, in turn, assist with comprehension (Braidi, 1995; Castrillo *et al.*, 2014; Long, 1996; Lyster, 2002; Pica, 1994; Rouhshad *et al.*, 2016). To accomplish this aim, analyzing English language learners' interactional output is essential, which helps determine the types of discourse functions used in the negotiation of meaning via Synchronous Mobile-Mediated Communication and examine the types of negotiation (meaning- and form- wise) between Synchronous Audio Mobile-Mediated Communication (SACMC) and Synchronous Written Mobile-Mediated Communication (SWCMC) modes of interaction. The Interaction Approach, as a second-language

acquisition methodology that is concerned with the development of language proficiency primarily via different styles and narratives of interaction and communication, helps accomplish this aim. Rouhshad et al. (2016), asserted that negotiating for meaning and form leads to the development of the second language. To date, several studies have been conducted on negotiations in FTF and written synchronous computer-mediated communication (SCMC), however, the nature of the negotiations in these modes has only been addressed in very few studies. According to Mackey (2006), Mackey (2012) and Sim et al. (2010), addressing this question is essential, as negotiating meaning and form is the main factor in the process of language acquisition and it can specify which mode may be more advantageous for language learning. To achieve this, Long proposes the Interaction Hypothesis in which "[n]egotiation for meaning, and especially negotiation work that triggers interactional adjustments by the NS [the native speaker] or more competent interlocutor, facilitates acquisition because it connects input, internal learner capacities, particularly selective attention, and output in productive ways" (1996, pp. 451–2).

Different scholars have defined the concept of negotiation for meaning in the second language acquisition in more or less different ways. For Cook (2015), "negotiation for meaning in second language acquisition [i]s an attempt to overcome comprehension problems." In the study of Ellis (2003), negotiating for meaning in SLA constitutes "a process by which two or more interlocutors identify and then attempt to resolve a communication breakdown". Lightbown and Spada (2006), see negotiation for meaning as "interaction between speakers who make adjustments to their speech and use other techniques to repair a breakdown in communication." In their recent study, Rouhshad et al. (2016), compare the nature of negotiating meaning in face-to-face and synchronous written computer-mediated communication modes of interaction. Their findings demonstrated that negotiating for form and meaning were insufficient in both interactional modes. There were, however, more negotiations for meaning in the face to face interaction. The findings also showed that the mode of interaction had a significant impact on the type of negotiations and their outcomes. They used the term the "activation interest" in the form to refer to the negotiation of form and concluded that the assessment of the occurrence of negotiations for form (acting as instances of noticing) was related to second language learning. Castrillo et al. (2014), studied discourse functions and written interactions via WhatsApp MMC to analyse how second language learners negotiate to create meaning. In his research, Yanguas (2012) compared oral CMC and face-to-face interaction in terms of the development of L2 vocabulary, at the same time examining the attitude of the participants towards these interactional modes. The findings of his study showed that the audio CMC group excelled both other groups and the participants displayed a positive attitude towards the CMC interactional mode. Kitade (2000) investigated the L2 learners' actual text-based interactions in online Internet chatrooms confirming their positive and categorically beneficial role in generating, among others, an environment and platform conducive to L2 learning and practice and facilitating comprehensible and contextualized communication, self-correction, and collaborative learning. According to Lyster (1998), the negotiation of the form results in instant repair more than recasts or explicit correction, especially in the case of grammatical and lexical errors but not on account of phonological errors. He proceeded to identify four corrective feedback actions as instances of the negotiation of the form: clarification requests, elicitation, error repetition, and metalinguistic clues. In their later work, Lyster and Ranta (1997), went on to observe that the negotiation of form through these four corrective feedback actions offered students a greater chance of making significant form-function links in the target language, without interfering with the stream of interaction and, at the same time, preserving the inherent reciprocity in negotiation. It also creates an environment of nonthreatening learner/peer collaboration, self-repair, and output modification. Lyster (1994), also claimed that teachers focused more on the negotiation of form compared to the negotiation of meaning in their communicative classroom discourse. Spada and Lightbown (1993), emphasized the need to make certain language features more prominent in the classroom setting, believing that it will lead to drawing learners' attention to form.

2.3. WhatsApp as an MMC Tool

WhatsApp groups, with their maximum capacity of 256 people, provide learners with an opportunity to chat with their classmates and teachers both in real time and/or offline. It is increasingly used by language learners to share, among others, free text SMS, voice calls, video calls, photos, videos, PDFs, and documents. Due to its rising popularity and evolution, for second language learning in particular, numerous studies have been dedicated to investigating innovative ways to use the MMC in ESL and EFL. In their study of the role of WhatsApp in second language learning, Almekhlafy and Alzubi (2017) concluded that WhatsApp provided learners with an exceptional, free, and effective educational environment. The findings also indicated that WhatsApp offered language learners more exposure to interactional language use. EFL learners also displayed a positive attitude towards the type of interaction WhatsApp offered. Veeresh and Kumara (2017), also confirmed the contribution of WhatsApp MMC as a good solution and tool for enhancing learner interaction and social practice and involvement in that it provided learners, through audio and written MMC, with a creative and constructive online learning setting. Saudi Arabian researchers Al-Shehri (2014), Fattah (2015), and Fodah and Alajlan (2015) reported similar results and recognized WhatsApp as the most widely used MMC tool, even compared to other powerful social media applications and platforms such as Facebook and Snapchat.

If used properly, ESL and EFL learners and teachers can greatly benefit from WhatsApp as a social network for communication. Mwakapina et al. (2016), studied the role of WhatsApp as a communication platform for improving language proficiency and reported interactive collaborative learner engagement and negotiation. Many studies have also resorted WhatsApp as the most widely used social media tool, eclipsing Facebook, Skype, and Snapchat Alshammari et al. (2017); Al-Shehri (2014); Fattah (2015); and Fodah and Alajlan (2015), making it a favourite MMC tool for teachers, and learners alike, for academic and general purposes. To add to the growing literature on

MMC, this paper attempts to examine different types of discourse functions used in the negotiation of meaning via Synchronous Mobile-Mediated Communication and the nature of negotiations via audio and written modes of interaction used on WhatsApp.

Echeverría *et al.* (2011), Hwang *et al.* (2011), Koole (2009), and Kukulska-Hulme and Shield (2008) studied the role of MMC in collaborative learning, concluding that MMC encourages synchronous and asynchronous collaborative learning and is specifically helpful in improving learners' speaking and listening skills in online and distance environments. According to Pettit and Kukulska-Hulme (2007), thanks to MMC, the number of learners who are enabled to participate in various activities suited to their individual needs and conditions is rapidly rising. In the words of Rosell-Aguillar (2007) "[h]aving audio or video online is not new, but what is innovative is to provide it as stand-alone items for independent learning delivered directly to your computer or portable media player."

2.4. Objectives of the Study

The stated objectives of the present study are:
1. To investigate different types of discourse functions used in the negotiation of meaning and form via Synchronous Mobile-Mediated Communication.
2. To compare Synchronous Audio Mobile-Mediated Communication (SAMMC) and Synchronous Written Mobile-Mediated Communication (SWCMC) modes of interaction in terms of discourse functions.
3. To determine the level of significance in the differences between Synchronous Audio Mobile-Mediated Communication (SAMMC) and Synchronous Written Mobile-Mediated Communication (SWCMC) concerning the negotiation of meaning and form.

2.5. Research Questions

This study aims to address, and try to answer, the following questions:
1. Which patterns of discourse functions are used in the negotiations performed via Synchronous Mobile-Mediated Communication?
2. Are there statistically significant differences between Synchronous Audio Mobile-Mediated Communication (SAMMC) and Synchronous Written Mobile-Mediated Communication (SWCMC) modes of interaction when applying discourse functions?
3. Are there statistically significant differences between the two SAMMC and SWMMC modes of interaction in terms of the negotiation of meaning and form?

3. Research Methodology

3.1. Participants

The current study was carried out with twenty-four undergraduate male Arabic speakers in the age group of 20-22 years enrolled for the BA program at the Department of English and Translation, Qassim University. All participants had had at least two years of formal university education, were adept at using smartphones, and had also experience using their devices for educational purposes. Their last English achievement tests ranked them all at the intermediate proficiency level. The participants were asked to form pairs with peers of their choice so that a conducive communicative environment was available. Observations were finally recorded with twelve participant pairs.

3.2. Design of the Study

The present study postulates that, by providing learners with online negotiation opportunities, synchronous audio and written mobile mediated communication affects the types of discourse functions and different types of negotiation of meaning and form generated by English language learners. The sample of the study participated in the negotiation of meaning via audio and written modes of interaction using the WhatsApp software. For this purpose, the present study analyzes the participants' interactional output.

The participants were given two two-way tasks (a 'Topic A' and a 'Topic B'). The task required the participants to negotiate the two topics of personality and friendship. In their interaction, the pairs were encouraged to negotiate meaning and form errors. Twelve participants performed the first task in written SMMC and the other task via audio SMMC (as shown in Table 1) in their free time or during the pairs' break time. The language output was saved in MS Word files for analysis.

Table-1. Distribution of pairs on the topics

Event	Pairs			Stage 1	Stage 2
1	1	2	3	First task in written SMMC	Second task in audio SMMC
2	4	5	6	Second task in audio SMMC	First task in written SMMC
3	7	8	9	Second task in written SMMC	First task in audio SMMC
4	10	11	12	First task in audio SMMC	Second task in written SMMC

SMMC = synchronous mobile-mediated communication

3.3. Data Analysis

Table-2. Findings of the first question Descriptive statistics on time-per-task and -words produced in both modes

	SWMMC Groups	SAMMC Groups
Words:		
Total	1765	2187
Mean	294.1	364.5
SD	3.78	1.3
Time (minutes):		
Total	128	156
Mean	21.3	26
SD	4.39	2.71

Table-3. The patterns of discourse functions used in negotiations via SMMC

| Function	Third-year groups		Fourth-year groups	
	Mean	SD	Mean	SD
Greetings	1.3	0.5	1.21	0.02
Topic initiation	1.98	1	1.67	0.99
Imperatives	5.32	0.8	4.99	1.00
Questions	4.9	1.3	5.23	1.01
Assertion	6.83	0.4	6.4	0.25
Off-topic	3.1	1.05	3.6	1.6
Requesting personal information	2.98	1.17	3.21	1.56
Humour	7.65	0.44	7.41	0.83
Topic continuation	4.33	1.31	4.09	0.74
Warning	2.86	0.49	2.01	0.06
Compliment and admiration	3.3	0.05	3.81	0.51
Apology	2.25	1.03	2.54	1.07
Protesting and disagreement	3.61	0.63	2.99	0.88
Challenging	2.26	0.81	3.0	0.91
Controversial	1.32	1.01	1.5	0.99
Empathic	5.24	1.07	5.88	1.1
Polite forms	3.51	0.02	3.21	0.03
Supporting statements	5.93	0.72	5.75	0.95
Emotional abuse	0	0	0.21	0

Figure-1. Graphical representation of the same follows in Figure (i) below
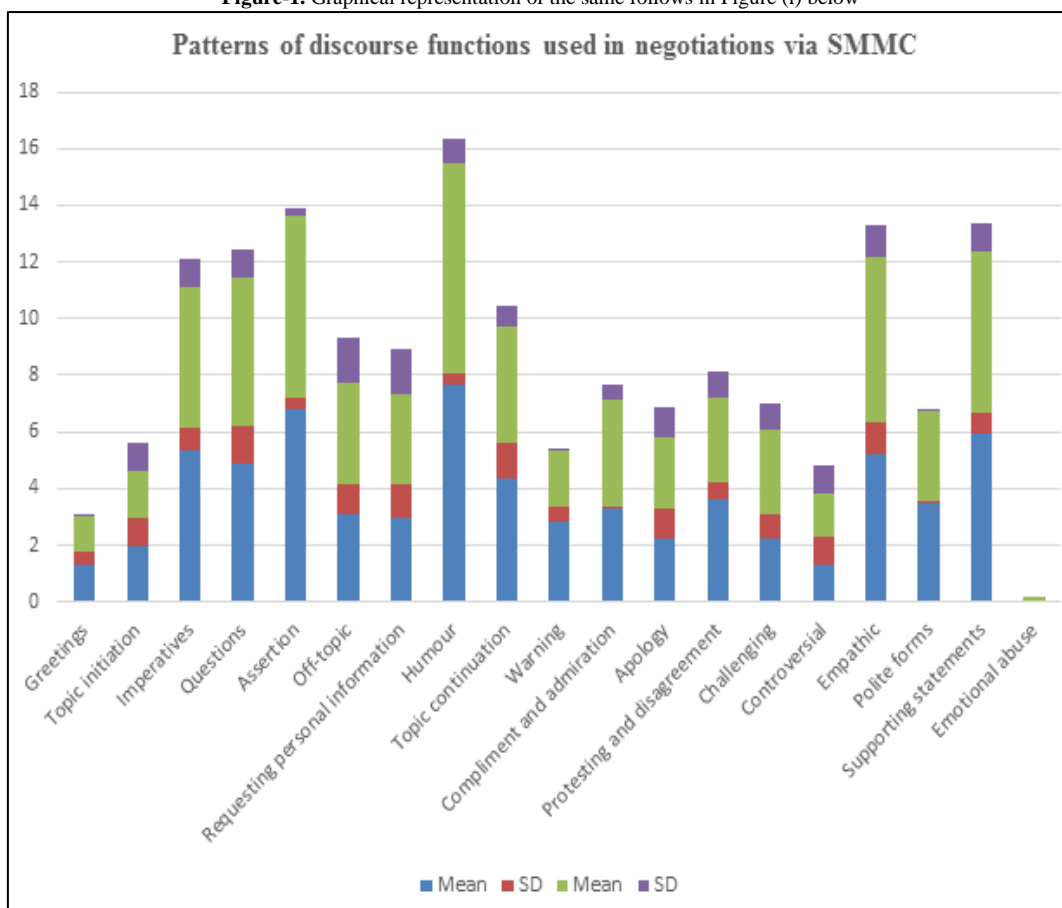
3.4. Findings of the Second Question

Table-4. Comparison of discourse functions by (SWMMC) and (SAMMC) modes of interaction

Function	SAMMC groups	
	Mean	Mean
Greetings	1.90	3.72
Topic initiation	2.81	5.23
Imperatives	7.81	5.4
Questions	7.51	4.9
Assertion	10.03	6.0
Off topic	4.9	2.1
Requesting personal information	4.58	1.93
Humour	11.35	14.85
Topic continuation	6.37	8.72
Warning	2.43	1.09
Compliment and admiration	5.20	8.32
Apology	3.52	5.76
Protesting and disagreement	5.10	3.19
Challenging	3.76	2.10
Controversial	2.07	1.2
Empathic	8.18	11.09
Polite forms	5.11	6.73
Supporting statements	8.08	9.49
Emotional abuse	0	0

Comparison of discourse functions by (SWMMC) and (SAMMC) modes of interaction
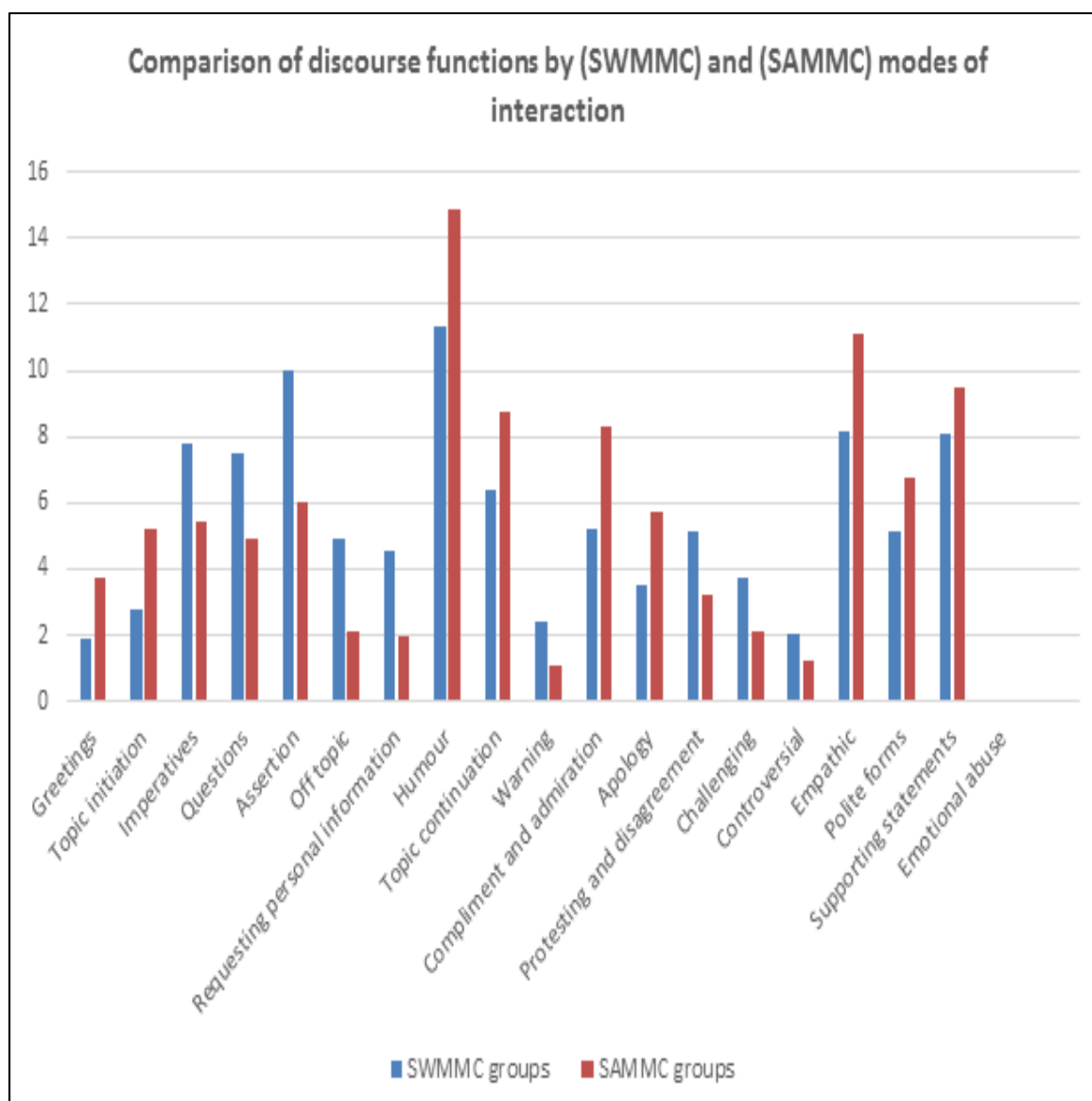
3.5. Findings of the Third Question

Table-5. Frequency of negotiations (form and meaning) for each pair and time-on-task produced in both modes

Pairs	Participants	SWMMC groups			SAMMC groups		
		Time (minutes)	N/F	N/M	Time (minutes)	N/F	N/M
Pair 1	Yazeed	20	6	2	22	7	8
	Asim		4	5		7	6
Pair 2	Abdul Malik	18	5	3	21	4	7
	Maged		6	1		6	9
Pair 3	Fahad	22	7	2	22	5	10
	Gharbi		4	1		7	9
Pair 4	Talal	20	5	3	20	7	8
	Saad		6	2		5	8
Pair 5	Meshal	21	6	2	18	6	7
	Turki		7	3		7	9
Pair 6	Sultan	20	5	1	20	6	9
	Adeeb		7	1		6	8
Pair 7	Ali	19	6	2	21	4	9
	Hamood		6	3		5	7
Pair 8	Omar	22	5	3	22	6	8
	Ali		8	1		7	8
Pair 9	Saleh	23	7	3	22	7	8
	Abdullah		6	2		5	6
Pair 10	Suleiman	21	7	1	21	5	8
	Abdul Aziz		6	2		5	7
Pair 11	Abdul Mageed	20	7	2	19	6	7
	Khaled		7	3		7	9
Pair 12	Osamah	20	6	1	20	5	8
	Gahad		4	1		7	8

Figure-3. This data is graphically represented in Figure (iii) below
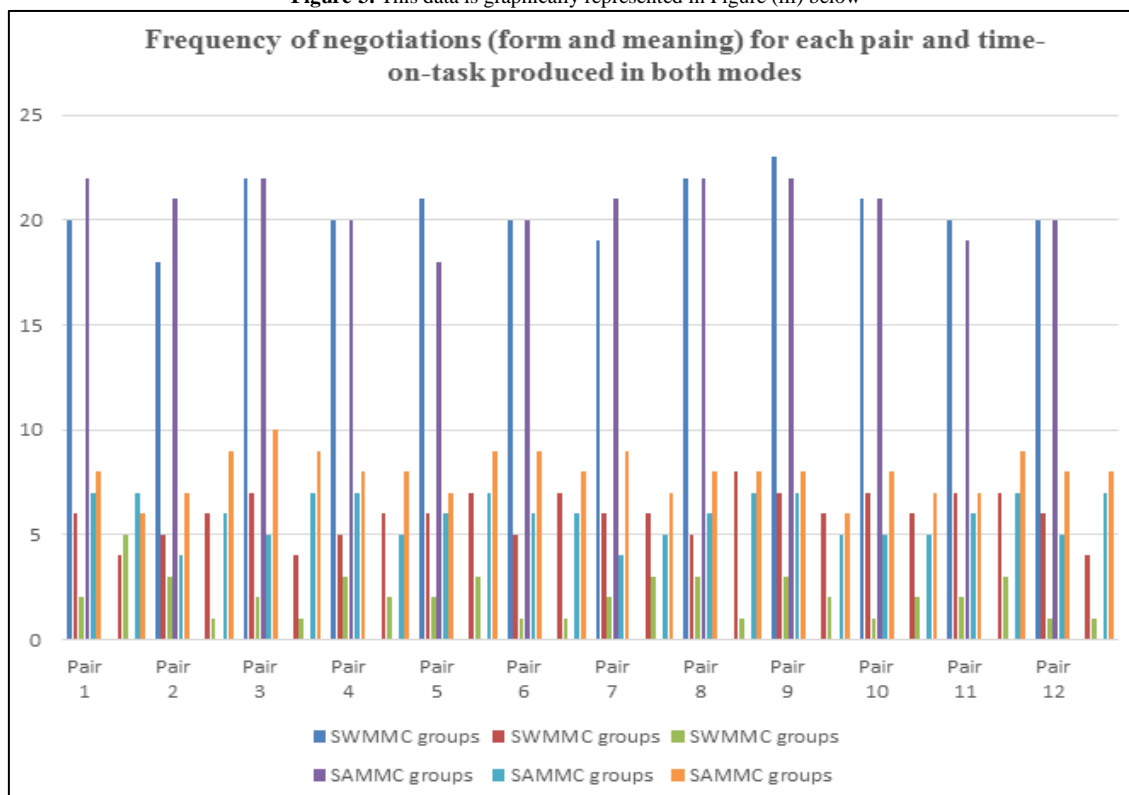
3.6. Analysis

Analysing the main discourse functions of the text chats, the most relevant that the authors could identify according to Hampel's and Sotillo's classification across the twelve pairs were social interaction (greetings and farewells), on-task negotiation of meaning, and off-task conversations. This qualitative research explored these areas by investigating how learners negotiate meanings and provide their partners with corrective feedback for their

language production. The working hypothesis was that by offering online negotiation opportunities and Synchronous Audio and Written Mobile Mediated Communication to the participants, the types of discourse functions and different types of negotiation of meaning and form the participants used were effected. The present study analyzed the participants' interactional output, in the form of two two-way tasks which required the participants to negotiate the two topics of personality and friendship, after they participated in the negotiation of meaning and form errors via audio and written modes of interaction using the WhatsApp software.

4. Conclusion

Teaching and learning English in an interactive setting is becoming increasingly essential as learners and teachers, in contrast to the past probably, study/teach and live in a world in which they are brought in real time contact with each other and their peers through the latest technology and, in order to be successful learners, language users, and educators, they have no choice but to equip themselves with, and incorporate into their teaching/learning methodology, whatever technological advancement that could facilitate the process of learning . In order to investigate, and test the applicability of this idea, the present research examined the impact of Synchronous Audio Mobile-Mediated Communication (SAMMC) and Synchronous Written Mobile-Mediated Communication (SWCMC) modes of interaction, the WhatsApp software specifically, and the negotiation of form and meaning they made possible on ESL and, here, EFL learning. For this purpose, and as the population of the study, twenty-four undergraduate male Arabic speakers in the age group of 20-22 years, who had had minimum two years of formal university education and knew how to use smartphones, were selected and distributed into twelve participant pairs. The results of the study showed the significant effect of this type of negotiation on learners' achievement and their positive and increased involvement and collaboration in the offered tasks.

Recommendations and Suggestions for Future Research

In this study, we observed and recorded the effectiveness of incorporating Synchronous Audio Mobile-Mediated Communication (SAMMC) and Synchronous Written Mobile-Mediated Communication (SWMMC) modes of interaction into the teaching curriculum. There are, however, other social platforms, Instream, Facebook, Reddit, Snapchat, Pinterest, Tumblr, etc. to name a few, the potential of which is being already used experimentally by users (teachers and learners alike) but their academic merit is remaining largely undetermined and unexplored. For future research, this author suggests further in-depth studies into how to tap into the great communicative and interactive potential of these social networks, and other modern technological tools, in order to use them optimally for educational purposes.

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