Arabic–English Code-Switching in the Saudi Video Gaming Community: A Sociolinguistic Perspective

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Abstract

In this sociolinguistics paper, I discuss code-switching behaviour while playing an online video game. The purpose of the study is to bridge the knowledge gap in the literature regarding code-switching within the Saudi Arabian gaming community. Although a significant amount of research has been carried out on the topic of code-switching, the phenomenon of code-switching among online gamers has received little attention. The focus of this research is Saudi online gamers playing online video games, specifically Overwatch (a team-based online multiplayer game). The research questions investigated how the game format (casual or ranked) and the age of the players influence the occurrence of code-switching. Data collection was based on a quantitative approach and participating in Overwatch matches. Observing the presence of players and their frequency of code-switching allowed for the creation of objective data. The findings indicate that both the format of Overwatch matches and the age of the players had an impact on code-switching. Matches that took place in an intense setting (ranked matches) had more instances of code-switching than those in a casual setting. The results show that the age of the players affected code-switching because younger players were less likely to code-switch than older players were. The research illuminates the ways in which individuals who are part of Saudi Arabia's gaming community interact with one another and sheds light on the online settings in which code-switching is most prevalent. Future studies should investigate other video game genres to broaden the understanding of the phenomenon of code-switching in online video games.

Keywords: code-switching, sociolinguistics, Saudi Arabia, online match, gaming, ranked, casual, conversational framework

1. Introduction

Code-switching has various definitions. This study employed one researcher's definition to better understand the phenomenon. MacSwan (2019) defined code-switching as the behavioural adjustment of switching from one language to another, and it is a common occurrence within the gaming community. Transitioning between languages is common across many age groups. Online gaming communities from non-English-speaking countries such as Saudi Arabia often switch between languages during gameplay to facilitate discussions with their teammates. Furthermore, because the English language is commonly used in video games, users are more likely to use it than other languages when discussing actions. According to Fatmala (2019), English is the most commonly used language in online gaming, and this study explains gamers' general need for code-switching. In this paper I studied Saudi Arabian gamers playing an online game and their Arabic–English code-switching behaviour while playing as part of an applied linguistics analysis. These Saudi Arabian gamers exhibited natural linguistic skills related to code-switching that are overlooked in the literature on linguistic characteristics.

Although there are various definitions of code-switching, this study uses this term to refer to switching between two languages. This paper investigates code-switching when participants in online team-based video game matches change language to communicate with other players. During such matches, players often switch from their native language, which in the context of this study is Arabic, to English. This example of code-switching exemplifies how this paper defines this term because it is crucial to the purpose of this paper in further researching the phenomenon.

Published by Blizzard Entertainment, *Overwatch* (2016) is a team-based online multiplayer game in which teams battle for victory, with one team winning each match. It includes both ranked and casual modes and requires

internet access to play. *Overwatch* can be played on a computer, an Xbox, a Nintendo Switch, or a PlayStation games console. The fundamentals of code-switching can be analysed by observing gamers playing a cooperative game such as *Overwatch*. Therefore, these players comprise an ideal case study for this research paper. The literature on code-switching, particularly Peter Auer's conversational framework, forms the foundation of this paper. The sample for this study was selected using convenience sampling. Participants confirmed their nationality and spoken language on an electronic informed consent form, confirming their identities as native Saudi Arabian speakers. Ages for the study were chosen based on the most common ages for players who participate in *Overwatch* matches. Gamers between the ages of 18 and 36 were designated as 'older gamers', whereas those between the ages of 13 and 17 were classified as 'younger gamers' requiring parental approval. As an active participant in the game, I used a PlayStation 5 to audio record the players, and then I analysed examples of code-switching in the recordings.

An analysis of where these matches occurred within the system of *Overwatch* is required. There are ranked modes in *Overwatch* as well as more casual modes. I analysed whether these matches occurred within the system of *Overwatch* in ranked modes or in casual modes. The mode being played affects the language used; for example, a high-stakes match might involve more severe language choices or a language reflecting extreme emotions because the match outcomes might affect a player's rank. Conversely, a casual game does not affect a player's rank. The difference between match modes is crucial to the conversational framework because it affects the structure of the conversations and creates a hierarchy for players. This study provides a basis for future research on code-switching by identifying the most prevalent instances of language-switching in the Saudi Arabian video gaming community.

1.1 Research Questions

This study answers research questions pertaining to code-switching techniques in the gaming world to broaden the understanding of the topic. Specifically, this study addresses the following two research questions:

1) Does the setting or format of a game (casual or ranked) affect the extent to which online gamers code-switch?

2) Does age play a role in how online gamers code-switch?

2. Literature Review

The current study aims to bridge the gap in the sociolinguistic knowledge about code-switching by considering real-time responses of Saudi online gamers. Since this study considers how gamers react to stimuli during a hardcore session rather than a passive one, *Overwatch* is a useful case study. It is an action-packed team game in which players are under constant pressure, so the code-switching used by players of this game differs from that examined in previous studies. Additionally, to the best of my knowledge, no sociolinguistic studies have been conducted on code-switching in the Saudi Arabian gaming community. However, some existing studies provide a useful basis for the analysis in the current study.

Auer's (1988) research contributed significantly to this study because it establishes ways for a researcher to apply linguistic concepts using a conversational framework. The various rules that Auer devised were adapted for the current study to ensure a thorough analysis. His use of two pivotal questions for a linguistic assessment was particularly useful. These questions are whether language alteration originates from a particular conversational structure and whether it contributes to the organisation of language around that structure (Auer, 1988).

Fatmala (2019) noted the predominance of English as the chosen language among gaming communities. The current study extends this research by explaining gamers' code-switching in general. English has become the unofficial language of many online communities, which is probably due to the Western-focused nature of major social media websites. This is why Arabic members of online communities, including gaming communities, commonly code-switch to English. Fatmala explored how the activity in which the participants are engaged, the setting in which it occurs, and the language mastery of the participants affect their use of code-switching.

In their research, Jose et al. (2020) showed how circumstances might compel some individuals to code-switch. The current research asks whether *Overwatch* matches are an example of such circumstances to illuminate the contexts that most strongly encourage code-switching in an online environment.

Kašćelan and Deuchar (2021) studied online streams to examine the use of code-switching in the streaming community. Their findings explain how streamer culture encourages code-switching. However, code-switching is even more common in the gaming community and is used less passively, distinguishing it from other examples of code-switching.

MacSwan (2019) argued that although video games have proved to be a valuable tool for research in recent years, and although many linguistic studies have examined code-switching, code-switching among gamers is overlooked in the literature. The aim of the present study is to research this overlooked aspect of linguistic analysis.

Myers-Scotton (2020) examined how code-switching and social negotiations affect data transfer between different languages. This study is relevant to the current work because it also relates to how people communicate through code-switching.

Paltridge and Phakiti (2015) discussed research methods that are relevant to the current paper's conversational framework. An understanding of alternative frameworks, such as an observational framework, was significant when choosing the right approach for the current paper to analyse more specific behaviours, including language and word choice.

Pamungkas's (2019) paper proved to be a helpful resource because it is one of the few papers to study code-switching in gaming and its language effects, which is the focus of the current study. Pamungkas focused on 'rising force' games, which belong to the massively multiplayer online role-playing game (MMORPG) genre and thus have a vastly different context from that of *Overwatch*. Whereas the communication in the MMORPG genre is more passive, *Overwatch* is a shooter game, so it encourages more active communication between players.

The current study is greatly aided by these previous research papers. However, as opposed to other video games previously studied, code-switching behaviours among *Overwatch* players are distinct because *Overwatch* requires active communication between players for them to succeed in a cooperative effort. Through a research study on the active communication of Saudi online gamers, this research aims to bridge the gap in the literature by improving understanding of the phenomenon of code-switching in video games, with a particular emphasis on the Saudi Arabian gaming community.

3. Methodology

3.1 Research Approach

The current study followed a quantitative approach, and data collection involved examining several matches of the game *Overwatch*. The presence of players and noting the amount of code-switching provided a method to create objective data, which provided valuable results for the study. All the recorded matches involved underage and adult gamers who actively used the chat feature in *Overwatch*.

Moreover, the conversational framework was used to complement the quantitative approach. The framework is based on the work of Auer (1988), who suggested practical methods for analysing discussions between study participants, including methods for recording audio and microanalysing different interactions. Thus, the quantitative approach and the conversational framework formed the foundation of the study.

An important element of a conversational framework is understanding the structure within which conversations occur. Thus, a descriptive analysis of where matches occur in *Overwatch* was required. The game mode (i.e., a ranked mode or a casual mode) could affect the language used by players; for example, a high-stakes match might involve more profane language choices or language that reflects extreme emotions because the outcomes of a match may determine a player's rank. Additionally, more communication may occur in ranked matches because it tends to help teams win. The higher a player's rank, the more skillful they are, which could also affect their code-switching behaviour. A ranked game may also affect a player's level because players move up a level for every win and down a level if they lose.

Conversely, casual matches do not affect a player's level. Thus, they may be less intense than ranked matches, which potentially affects the amount of code-switching that occurs. Thus, the type of match is crucial to the conversational framework because it affects the conversational structure and creates a hierarchy among players.

3.2 Data Collection Methods

The conversations were recorded using the built-in recording capabilities of the PlayStation 5. The gaming sessions revolved around active players on two teams. Each team included six players; I actively participated in the games as a member of one team. The participants of the study comprised *Overwatch* players on my team. The game's chat feature could only be used with people from the same team; thus, members of the opposing team were irrelevant to the study.

Moreover, this study used convenience sampling, which relied on the participants being online at the same time I was, when recording in-game conversations was most convenient. A total of 70 games were played, and the

average duration of each game was 15 to 20 minutes. However, only 10 games—five ranked matches and five casual matches—were selected for the analysis because they featured sufficiently active players of different ages and thus yielded sufficient data for the study.

The data were gathered at different times throughout the day to capture an adequate number of audio recordings. The gaming sessions occurred between 1:00 p.m. and approximately 7:00 p.m. Universal Time Coordinated (UTC). Five out of 10 sessions occurred from 5:00 to 7:00 p.m. UTC, three from 2:00 to 4:00 p.m. UTC, and two from 1:00 to 2:00 p.m. UTC.

In total, 45 players participated in the study. Informed consent was obtained from all participants. Parental approval was requested for underage participants. After each game, an informed consent form was electronically sent to participants using the PlayStation's messaging feature. The form was also used to collect demographic information such as participants' nationality, age, and spoken languages.

Participants' ages were collected to address the second research question. Out of 45 participants, 25 were aged 18–36 years (classified as 'older gamers'), whereas the other 20 were aged 13–17 years (classified as 'younger gamers'). Although gender was not a variable of analysis in this study, it should be noted that all participants were male.

Additionally, participants were asked to specify their spoken languages and nationality to ensure that all of them were Saudis; this was required for the conversational framework portion of the study. All the participants knew Arabic and English, which simplified the study. This information was especially important because it is impossible to judge some aspects of linguistics, such as body language and other observations, in online gaming sessions (Paltridge & Phakiti, 2015).

3.3 Data Analysis Methods

The *Overwatch* matches provided data for the analysis in the form of audio recordings of in-game conversations. The tools used to analyse the data varied and were useful for examining code-switching among participants. The PlayStation 5 was used to record audio conversations from the games. The recordings were then processed using a computer program, Sony Vegas Pro, to identify instances of code-switching. The program has a mode that allows it to determine when different languages are being used. Sony Vegas Pro, which included an auto-captioning tool for capturing all speech, was used to process the data. A further analysis included collecting various examples of code-switching and counting the number of times they occurred.

Another set of tools was identified from conversational framework studies in similar areas concerning code-switching. In the current study, the conversational framework was adapted to record matches in which code-switching occurred involving Saudi gamers. The research questions were answered by analysing the quantitative data using a conversational framework—for example, by studying how the game mode and players' ages affected code-switching behaviour.

Auer (1988) devised many tools for the conversational framework, and these were adapted for this study. This framework, for example, relies on the transcription of audio and video recordings. Rather than transcribing the in-game conversations, the collected data for the current study are presented in a tabular format to ensure that readers can easily understand the findings and significance of the research. Moreover, each player was assigned an age role based on whether they were classified as 'younger' or 'older' to refine the results. Additionally, the players were classified according to how much they code-switched and how often the code-switching occurred. The results section uses these roles to highlight the differences in code-switching behaviours between participants in different age groups.

4. Results and Discussion

The results of the study conclusively answered the research questions regarding how the format of the game and the ages of the players influenced code-switching within *Overwatch*. The results showed that the mode of the game (ranked or casual) significantly affects the code-switching behaviour of the players. Prolonged periods of code-switching were observed among participants playing ranked games, whereas casual matches involved fewer instances of code-switching. Additionally, older players code-switched more often than younger players did, and aggregates showed that younger players typically code-switched for shorter durations than older players did. These results indicate that players' use of language in video game interactions could be used in future linguistics research.

4.1 Data Analysis

Modes			Casual					Ranked		
Session number	1	2	3	4	5	6	7	8	9	10
Instances of code- switching among older players	12	17	19	12	24	26	28	32	27	30
Instances of code-switching among younger players	3	7	17	8	10	9	8	7	14	14
Number of older and younger players	3 older players 2	1 older player 2	2 older players 3	3 older players 2	2 older players 2	2 older players 2	2 older players 3	3 older players 2	4 older players 1	2 older players 2
	younger players	younger players	younger players	younger players	younger players	younger players	younger players	younger players	younger player	younger players

Table 1. Code-Switching information

The results were based on data collected throughout 10 *Overwatch* play sessions, and approximately three hours of *Overwatch* audio recordings were analysed. These 3 hours included approximately 44 minutes of code-switching, during which native Arabic speakers communicated with their teammates. Conversations were far more frequent during ranked matches than during casual matches. Ranked matches also tended to occur among an older player base, so the data were skewed towards older players, thus accounting for most of the code-switching. These players may have had greater knowledge of language use and video games due to their age.

In total, 324 instances of code-switching were observed in the 3 hours of audio recordings. Code-switching occurred most frequently during intense periods of competition when players were most actively engaged. This finding differs from other research on code-switching, which observed a more passive use of code-switching (Fatmala, 2019).

In many cases, code-switches comprised simple instructions or orders, such as one player telling another to go to a specific part of the *Overwatch* map. Additionally, players often admonished by others for not engaging in code-switching. Research on social negotiations supports this phenomenon in which intense conversation promotes cooperation. Specifically, code-switching occurs more frequently during intense discussions, such as moments affecting the game's outcome. This evidence shows that code-switching can be crucial to communication in tense situations (Myers-Scotton, 2020).

In the current study, players who were about to score or be scored against were likelier than usual to code-switch to remark on the event to other players. In these instances, English was the language of choice, which may be attributed to the influence of popular players from English-speaking countries. Further research would be useful in explaining this choice and determining what makes English appealing to code-switchers who speak Arabic as their native language (other than the fact that it is a common language worldwide).

Code-switching increased near the end of a match due to the heightened intensity of play and discussions of the matches that had just ended. Jose et al. (2020) supported this notion that code-switching occurs more readily in intense situations. In most of the gaming sessions examined in this study, code-switching occurred frequently during the last minute of the match. Code-switching was also relatively common during the opening minute of a match because players were more likely to discuss strategy during this period. Briefly, the beginning and end of a match exemplified intense periods of code-switching.

Other studies on code-switching showed a tendency for code-switching to occur when there is a reason for players to discuss specific topics (Fatmala, 2019). This trend was consistently observed in the present study, although there were some outliers. In one match, code-switching to discuss specific topics did not occur after the opening 5 minutes, with 95% of such instances occurring in the first minute. This result shows that some players exclusively use code-switching to plan matches. Planning a match involves deciding on the plans and tactics a team will use. Once the match is underway, the players might not use further code-switching because they want to hide their discussion from potential listeners, such as the opposing team, when live-streaming their gameplay to avoid revealing their strategy to enemy teams.

5. Conclusion

This study showed considerable potential for gaming to be used in studying linguistics. Games provide an intense environment for code-switching, which encourages native Arabic-speaking players to code-switch to English during matches, especially during matches with high stakes. Code-switching might correspond with how players interact with others within the context of a game. The research answered the two research questions— namely, Does the setting or format of a game (casual or ranked) affect the extent to which online gamers code-switch? and Does age play a role in how online gamers code-switch?

The results indicate that code-switching occurs differently depending on the format of the game. In this study, code-switching was more common in ranked matches than in casual matches. For gaming (and *Overwatch* specifically), how players interact encourages code-switching as a form of negotiation or social dynamic between different groups, such as younger and older gamers. Furthermore, older players tend to code-switch more than younger players do. These findings answer the two research questions, showing that game format and age shape how code-switching occurs. For gaming and for *Overwatch* specifically, code-switching might take the form of applied linguistics to command and communicate. In the most frantic parts of a match, code-switching allowed players to give quicker, more direct information to each other and to respond in more emotionally charged ways.

Overall, the present research shows extraordinary potential for code-switching research in gaming. Regarding the Saudi Arabian gaming community, this study shows that code-switching plays a unique role in games. The communication between players includes code-switching to initiate a new mode of discussion because effective communication is necessary to win games. Research does not often discuss the gaming community, particularly the online gaming community, although millions of interactions occur daily in gaming settings. Therefore, further research could uncover important information about how games explain the mechanism of code-switching.

This study had some noteworthy limitations. For instance, only one game was studied, meaning that the findings may not be generalisable outside the *Overwatch* game. Further, data were gathered only from male players because no female Saudi players consented to be recorded.

Further research might examine more specific details to explain players' choices of a certain language and their use of code-switching in a more controlled setting than that of the present study. *Overwatch* is a team-based shooter game, but many other game types exist. Therefore, other games, including games from other genres, could be analysed. Studying single-player games might also be useful because gamers might stream these games to an audience using different languages. Moreover, this paper was limited by its short time frame and restricted framework. Future studies should further develop the conversational framework to provide robust results concerning code-switching.

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Appendix A

Informed Consent Form

0	التبديل اللغوي من اللغة العربية إلى اللغة الإنجليزية في مجتمع ألعاب الفيديو السعودي للمنعودي المرافقة الإلكترينية	
	تمت مشاركة هذا النموذج لتوضيح الغرض من هذه الدراسة و لدعوتك للمشاركة في هذا البحث. يرجى ملاحظة أن المشاركة في هذا البحث طوعي تمامًا ويمكنك الانسحاب من المشاركة قبل أو أثناء أو بعد مشاركتك للمتابعة في هذا النموذج ، الرجاء الضغط على زر (التالي) أو (Next) شكرا لك على وقتك. Next	
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	لا توجد مخاطر نهائياً عند المشاركة في هذه الدراسة حيث سيتم معالجة البيانات التي تم جمعها بسرية تامة لحفظ خصوصية اللاعبين قد لا ترغب بالإجابة على بعض الإسئلة في هذا النموزج، إذا قررت المشاركة وواجهت أسئلة قد يصعب عليك الإجابة عليها ، الرجاء تركها بلا إجابة للمتابعة في هذا النموذج ، الرجاء الضغط على زر (التالي) أو (Next)	
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بانتهاء الدراسة يمكنك الحصول على نتائج الدراسة حيث سترسل إليك عبر البريد الإلكتروني . يرجى إرفاق البريد الإلكتروني .في حال الرغبة في الحصول على نتائج هذه الدراسة

لا تترد أبداً في طرح أي سؤال

للتواصل:

الاسم : فرح البطحي

الإيميل:

Farahalbuthi@gmail.com

رقم الجوال : ٥٠١١١١٤٩٧

حساب سوني:FarahSolo

حساب بليزارد:Farah#21863

حساب دیسکورد:FarahSolo #9426

من خلال التوقيع على هذا النموذج ، أصرح بموجب هذا بأنني قد قرأت هذه الموافقة الإلكترونية ، أو أن المحتويات قد تمت قراءتها لي من قِبل الباحثة عن طريق دردشة لعبة أوفرواتش (شات) للدردشة الصوتية

لقد أتيحت لي الفرصة لطرح الأسئلة على الباحثة لهذه الدراسة وتم الرد على أسئلتي. أفهم أن مشاركتي في هذه الدراسة . تطوعبة بحتة ويمكنني سحب مشاركتي في أي وقت. أفهم أيضًا أنه إذا قررت الانسحاب ، فسيتم حذف المعلومات التي قدمتها نهائيًا من سجلات الباحثين دون أن تتأثر علاقتي بهم

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