User-Centric Studies in Game Translation and Accessibility

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Mikołaj Deckert and Krzysztof W. Hejduk

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Chapter 7

Arabic mobile game localizations

Gamer profiles, preferences, and implications for an immersive gaming experience

Mohammed Al-Batineh

United Arab Emirates University (Al Ain, UAE)

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7.1 Introduction

Advancements in smartphone hardware, with high-resolution displays, powerful processors, and increased RAM, along with smart operating systems have transformed smartphones into powerful handheld consoles. These advancements have allowed the gaming industry to enter the smartphone space, offering complex games combining advanced graphics, storylines, and mechanics that were once exclusive to home consoles and personal computers. According to the recent Newzoo *Global Games Market Report* (2023), the gaming industry currently stands at $187.7 billion in revenue, with mobile gaming accounting for the highest share—approximately 49% of the total global gaming revenue. Apart from technological advancements, the driving force for this growth is localizations. Localizations of mobile games have emerged to make mobile games available to gamers of different linguistic and cultural backgrounds. Localization entails the process of adapting a mobile game to meet the linguistic, cultural, and legal expectations of the target market users by translating textual content into the target language and, possibly, going further to adapt characters, storylines, quests, and gameplay to make the game relevant for gamers in the target market.

The Middle East and North Africa (MENA) region hosts one of the most active gaming communities in the world; approximately 75% of the region's mobile users play video games on their phones (Dennis et al., 2018). The region generates substantial revenues for game developers on different platforms in terms of user spending, with the average individual gamer in Saudi Arabia alone spending approximately 250 USD, the highest user spending in the world (Wilkins & Lee, 2021, p. 190). Thanks to localizations, most games played by the community come from foreign

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developers, emphasizing the global reach of these digital products through international marketplaces such as the Google Play Store and Apple App Store. Developers have recognized the market value of the MENA region and have adopted different approaches to address the need for high-quality localizations (Sayaheen, 2024). Some video game developers have built in-house Arabic localization teams, whereas others have outsourced their localization needs to established mobile game localization vendors in the Arab world. Meanwhile, a number of developers have built studios in the Arab world, such as Ubisoft.

Despite market demand and the booming industry of mobile game localization in the MENA region, limited attention has been paid to translation or localization studies. To address this gap, this chapter explores the field of mobile game localization in Arabic, focusing on mobile gamers' profiles, gaming preferences, and their preferences for and reception of localized mobile games. This chapter investigates localization's impact on players' immersion, enjoyment, and overall experience. To this end, an online survey was designed to collect data on mobile gamers' gaming habits, preferred genres, spending, and reception of localized games. This chapter hopes to contribute to the field of mobile game localizations by offering valuable insights into preferences for and reception of localized mobile games among Arabic-speaking audiences, thus providing practical implications for game developers and localization teams in tailoring their products to Arabic-speaking gamers.

7.1.1 Related works

As mentioned previously, only a few studies have focused on Arabic localized video games from linguistic, cultural, or technical perspectives (Abu Kishek, 2016; Al-Batineh, 2021, 2023; Al-Batineh & Alawneh, 2022; Mahasneh & Abu Kishek, 2018), considered their history and challenges (Goaid Alotaibi & Tuhaitah, 2021), fan localizations (Al-Batineh & Alawneh, 2021), adaptations (Al-Ajarmeh & Al-Adwan, 2022), and more recently, localization of food-taboos (Al-Batineh, 2023). Gamers' reception of localized video games has rarely been discussed with reference to Arabic, but Al-Batineh and Alawneh (2022) did so as part of their research investigating video game localizations in the Arabic video game market by soliciting gamers' opinions about their preferred localization level and approach. Their study provided insights into gamers' reception of localized games on various platforms and whether they preferred subtitles or dubbed voiceovers in Modern Standard Arabic (MSA) or Arabic localized dialects (ALD). Lately, this topic has been debated in Arabic video game localization and gaming communities. Al-Batineh and Alawneh (2022) reported that the majority of gamers prefer to play games with

English voiceovers and Arabic subtitles. Moreover, their survey revealed a preference for MSA due to its comprehensibility across the Arab world.

From another perspective, Jarrah et al. (2023) investigated 112 Arab gamers' reception of Arabic localization in *PUBG* and *Free Fire* mobile games across six constructs: need for subtitles, technical aspects (font, text display, or interface), language issues (errors), language preference, attitudes toward localization, and future recommendations. The results revealed a strong preference for Arabic localization due to cultural relevance and a better understanding of the game. Overall, the respondents had positive attitudes toward localizations if the games had improved technical performance and minimal to no language issues. The authors called for more studies investigating the reception of localizations of mobile games into Arabic with a larger sample of the mobile gaming community, which is the main purpose of this study.

Beyond Arabic video game localizations, studies have investigated gamers' reception of localization practices in a limited number of languages, such as French (Ellefsen & Bernal-Merino, 2018), Spanish (Fernández-Costales, 2016; Zorrakin-Goikoetxea, 2022), Persian (Kafi et al., 2018), and Chinese (Kuo & Lai, 2023). For instance, Fernández-Costales (2016) investigated players' attitudes and preferences regarding the localization of video games from English into Spanish, focusing on 94 Spanish university students' preferences toward foreignization or domestication approaches. The majority of the participants were frequent gamers aged 20–30 with upper intermediate or advanced English proficiency. Fernández-Costales (2016) reported that most of the participants (71%) believed that translation impacted the game experience. Moreover, approximately 87% of the participants preferred foreignizing and retaining original cultural references and humor; they believed that certain cultural elements, such as names or locations, should follow a no-translation approach. Furthermore, the participants preferred subtitles over dubbing when playing English-language video games. Therefore, the author argued that the traditional approach of domestication-enhancing in localizations requires rethinking, given the shifting preferences of gamers, and stressed the need for more nuanced, player-focused research to guide translation approaches as the gaming market continues to evolve.

Similarly, Ellefsen and Bernal-Merino (2018) investigated the language preferences and attitudes toward translated game materials among gamers from various French-speaking regions, including Belgium, France, Canada, and Switzerland. They found that within the French-speaking locales surveyed, gamers had varied preferences for playing games in English versus French, based on individuals' English proficiency and background. Notably, participants from multilingual locales showed an increased tendency to play games in English and reject domesticating translation strategies

such as name adaptation, dubbing, and censorship. Moreover, most participants preferred to play games in a language related to the game's context. The respondents agreed that localizations enhance the gaming experience and help facilitate their understanding of game mechanics. Ellefson and Bernal-Merino's (2018) study provides insights into new localization approaches for video games in French-speaking markets, indicating that the practices used at the time of their study needed to be reconsidered.

Using an online survey, Khoshsaligheh and Ameri (2020) surveyed gamers' profiles, preferences, gaming habits, and perception of video game localizations in Iran. They reported that in Iran, gaming is male dominated, with 93% of all gamers being male. The survey results revealed that generally, Iranian gamers were dissatisfied with localization approaches for games into Persian because the vast majority (85%) preferred a "foreignizing translation strategy whereby cultural elements are not adapted but are kept intact." Similar to the studies of Fernández-Costales (2016) and Ellefsen and Bernal-Merino (2018), Khoshsaligheh and Ameri (2020) found that most gamers preferred subtitles over dubbing, regardless of their English proficiency or gaming habits.

Zorrakin-Goikoetxea (2022) investigated developers' and gamers' preferences for different dialects of Spanish used during video game localizations. To this end, the researcher surveyed video game developers (n = 172) about their preferences in the localizations of games into Spanish and gamers (n = 569) to reveal their tolerance for foreign varieties. Most games were localized into European Spanish, which was found to be the preferred variety of Spanish among game developers. However, most participants exhibited some level of discomfort in playing video games that were localized into a different language than their own, with 25.7% and 36.2% of the respondents being greatly and slightly bothered, respectively. The results revealed that the majority of players preferred to play fully-localized video games with Spanish localization and dubbing (44.6%), whereas a considerable percentage (30.2%) preferred subtitles with English voiceover instead of Spanish dubbing. This contradicts the results reported by Khoshsaligheh and Ameri (2020), Fernández-Costales (2016), and Ellefsen and Bernal-Merino (2018), all of which indicated a general preference toward subtitles rather than dubbing.

Recently, Kuo and Lai (2023) investigated 75 Chinese Malaysian gamers' attitudes toward the Chinese translations of *Stardew Valley's* in-game texts. The authors used an online survey to collect data about the gamers' attitudes, linguistic preferences, and needs when playing video games in Chinese. The results revealed that a vast majority (70.67%) preferred Chinese as the language for the games they played. Additionally, localizations played a role in the purchase decisions of 46.67% of the participants, who reported that they preferred to play games in Chinese and were

willing to wait for the release of the Chinese version of games rather than buying the English version at launch. These findings align with those of Zorrakin-Goikoetxea (2022), who reported that Spanish gamers prefer playing in Spanish rather than English. Additionally, Kuo and Lai (2023) investigated gamers' preference for two variations of Chinese: simplified and traditional Chinese. The findings revealed a general preference for simplified Chinese. However, when asked to select their preferred translation excerpts from *Stardew Valley*, which included both variations of Chinese, the majority of the participants preferred traditional Chinese because they were perceived as more accurate, fluent, vivid, and idiomatic. The researchers noted that the simplified Chinese version of the game "contains many regional expressions that appear unfamiliar to Chinese Malaysian gamers" (p. 10).

The limited number of reception-focused studies regarding video game localizations underscores the importance of investigating gamers' reception, attitudes, and needs for game developers. These studies emphasize that understanding players' reception of localization approaches is crucial to evolving localization approaches and maximizing players' gaming experience. This study attempts to add to the literature comprising player-centered reception studies by investigating mobile gamers in the Arab world, aiming to provide insights into their gaming habits, linguistic preferences, and attitudes toward current localization practices. The following section details the study's methodology, including its data collection and analysis approaches.

7.2 Methodology

7.2.1 Research design

This chapter investigates Arab mobile gamers' habits and profiles, along with their reception of localized video games into Arabic. To this end, an online survey was developed and divided into four main sections. The first section collected demographic information (gender, educational level, and English proficiency) and details about gaming habits, such as time spent on playing games, preferred genres, and expenses. The second section included questions about the reception of games localized into Arabic, examining the impact of localization on immersion[1], satisfaction, and the overall gaming experience. Meanwhile, the third section focused on mobile gamers' preferred level of localization. Finally, the fourth section focused on the participants' preferences between MSA and ALD in mobile game localizations. The survey was designed by consulting the literature (Al-Batineh & Alawneh, 2022; Ellefsen & Bernal-Merino, 2018; Fernández-Costales, 2016), and it was customized to meet this study's

Table 7.1 Survey statements on gamers' preferences for and perceptions of localized games

Construct	*Statement*
Preference for Localization.	I prefer video games that are localized into Arabic.
	I do not buy video games if they are not localized into Arabic.
	I do not play video games that are not localized into Arabic.
Perceived Impact of Localization on the Gaming Experience.	Localized video games enhance the gaming experience.
	Localizing mobile games facilitates understanding of game mechanics.
Perceived Quality of Localization.	Arabic localizations of mobile games are of a high quality.
Localization as a Standard Practice.	All mobile games should be localized into Arabic.
Arabic Language Variety Preferences in Localization:	I prefer playing mobile games localized into Modern Standard Arabic.
	I prefer playing mobile games localized into colloquial Arabic dialects.

specific needs, particularly Arabic localizations of games. The survey examined five constructs through nine Likert-scale statements, which are detailed in Table 7.1.

7.2.2 Pilot study

A pilot study was conducted to test the survey with a small subset of the target population. The study sought feedback on survey items' clarity, relevance, and length, based on which the questionnaire was refined to improve its comprehensibility and participant engagement. These included rephrasing statements three and five and merging two statements to compose the question items for construct five. The phase testing was instrumental in ensuring that the final survey was well-tuned to the study objectives.

7.2.3 Participant recruitment

The participants were recruited using snowball sampling, leveraging social media platforms such as Facebook, Twitter, and dedicated gaming communities on Reddit and Discord. The participants were recruited

from August 12 to October 20 2023, successfully gathering 382 responses. The recruitment process was designed to encourage participants to refer future participants, leveraging the interconnected networks of gamers. Any Arab gamer with experience in playing localized mobile games was eligible to participate, ensuring a wide array of inputs on the subject.

7.2.4 Survey reliability test

A Cronbach's alpha test yielded a coefficient of 0.829, indicating high internal consistency (above 0.70). To further verify the robustness of this result, we computed a 95% confidence interval around the alpha value, which ranged from 0.803 to 0.854, further supporting the survey's reliability.

7.2.5 Data analysis

The survey data were analyzed quantitatively to provide insights into patterns and trends in gamers' demographics, gaming habits, and localization preferences related to four of the constructs mentioned above. Additionally, an analysis of variance (ANOVA) was conducted to determine any statistically significant effects in gamers' English proficiency on their localization preferences. The purpose of this test was to identify whether different English proficiency levels corresponded to distinct preferences for localization related to the first four constructs: preference for localization, perceived impact of localization on the gaming experience, perceived quality of localization, and localization as a standard practice. For the fifth construct—language preferences in localization—a t-test was used to compare the means of two independent groups—those who prefer games in MSA and those who favor games in colloquial Arabic dialects. The t-test assessed whether preference for the type of Arabic used in localizations differed significantly between these two groups. SPSS was used to conduct these analyses.

7.3 Study findings

This section features the findings of the study. First, the study provides the results of the survey's first section, which collected the participants' demographic information and gaming profiles. Next, results are presented on mobile gamers' reception of Arabic mobile game localization, focusing on their preferences for localization, the perceived impact of localization on the gaming experience, the perceived quality of localization, the perception of localization as a standard practice, and preferences for language variants in localization.

7.3.1 Demographics

The survey included demographic questions on gamers' gender, level of education, and English proficiency, revealing patterns and correlations between demographic groups and their localization preferences.

Surprisingly, the data revealed significant female dominance in the mobile gaming sector in the Arab world. Females comprised 65.18% (n = 249) of the participants compared to 34.82% of males (n = 133) (Figure 7.1). This finding contradicts most previous studies on console games in the Arab world, for example, that conducted by Al-Batineh and Alawneh (2022), who reported male dominance. Similarly, researchers in other languages, for instance, French (Ellefsen & Bernal-Merino, 2018), Spanish (Fernández-Costales, 2016), and Persian (Khoshsaligheh & Ameri, 2020) had reported similar findings of male dominance. This result suggests that key differences may exist between mobile and console gaming audiences and their preferences, indicating that further exploration of the factors driving the dominance of females in mobile games compared to console games in Arabic is required (cf. Discussion; cf. Ugo Ellefsen & Valérie Florentin's chapter in this volume).

According to Figure 7.2, In terms of English proficiency, most participants reported being at an intermediate (58.9%) or advanced (28.53) level, with about 12.57% reporting beginner-level proficiency. In other words, most participants have an intermediate command of English, the dominant language in the gaming industry, enabling most Arab participants to choose between playing games in English or Arabic.

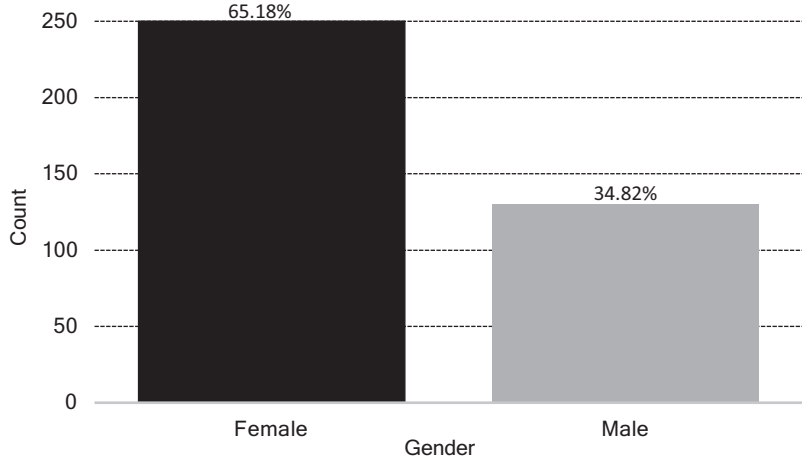

Figure 7.1 Gender distribution among Arabic gaming participants.

Self-reports of English proficiency can be justified by the data collected on education because English is the primary teaching language in most higher education institutions in the Arabic world. Figure 7.3 reveals that of our participants, 76.44% reported that they are engaged in or have

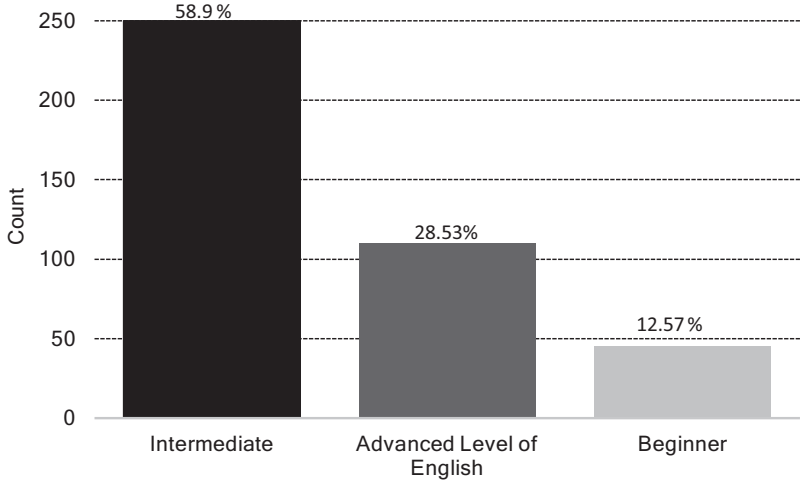

Figure 7.2 Participants' self-reported English proficiency levels.

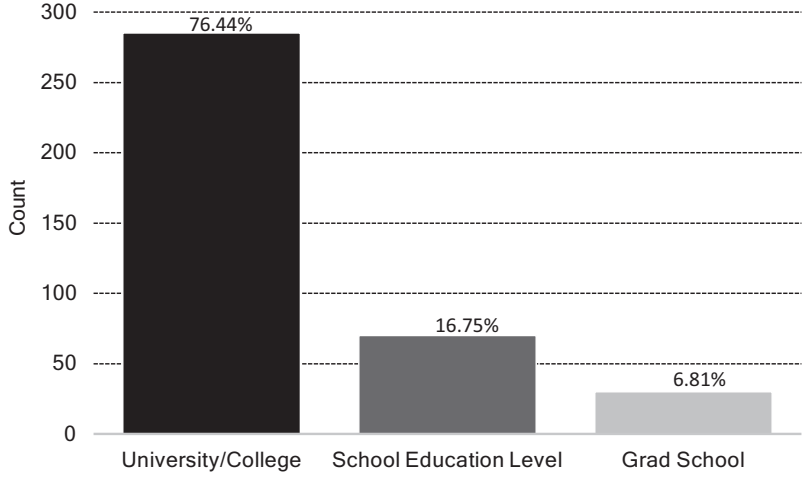

Figure 7.3 Arab participants' educational levels.

completed a university or college degree; approximately 6.81% had joined a graduate program, and 16.75% were still in school. These young, educated gamers would likely provide informed, diverse responses to the survey questions.

7.3.2 Gaming profiles

The survey asked three questions about participants' gaming, including their gaming habits, preferred genres, and expenses. The data revealed that most participants (47.91%) were casual gamers who spent less than two hours per week on mobile games. Meanwhile, a good portion of the participants (31.68%) spent between 2 and 10 hours a week on mobile games. Serious gamers, who play more than 11 hours a week (See Ellefsen and Bernal-Merino, 2018; Geurts, 2015) comprised approximately 20.42% of the participants—12.83% played for 11–25 hours, 4.19% for 26–50 hours, and 3.40% exceeded 50 hours per week. In contrast, for console gamers, Al-Batineh and Alawneh (2022) reported that about 53% (n = 613) played more than 11 hours a week. It is worth noting that mobile games are designed for short sessions and that some factors, such as screen size and mobile game mechanics, may contribute to the relatively limited time spent on mobile games compared to console games.

Regarding the participants' expenses on gaming, it was revealed that the vast majority (63.09%) reported spending nothing on mobile games. Meanwhile, 13.87% spent less than 10 USD; 17.54% spent 10–30 USD; 2.62% spent 30–50 USD; 2.09% spent 50–100 USD; and 0.79% spent more than 100 USD per month. Expenses on mobile gaming can be viewed in light of mobile games' dominant pricing models, that is, relying mostly on freemium games, which involve playing for free but including in-game purchases or in-game advertising (Simon, 2023, p. 71). These two models were successful in mobile gaming, allowing gamers with different habits and profiles to enjoy video games for free while also generating revenue for developers.

The final gaming profile questions revealed that gamers tended to prefer action games (44%) followed by preferences for more than one type of genre (26.44%). Some of the respondents enjoyed and preferred simple, easy mobile games (10.21%); others preferred educational games (8.12%), and a minority played strategy (4.97%), sports (3.24%), and simulation games (2.88%).

7.3.3 Localization preferences

Localization was assessed with the three items presented in Table 7.2.

Table 7.2 Responses about preferences for localization

Items	*Positive*	*Neutral*	*Negative*	*Total*
I prefer video games localized into Arabic.	149 (39.01%)	125 (32.72%)	108 (28.27%)	382
I do not buy video games if they are not localized into Arabic.	57 (14.92%)	82 (21.47%)	243 (63.61%)	382
I do not play video games that are not localized into Arabic.	42 (10.99%)	78 (20.42%)	262 (68.59%)	382

7.3.3.1 Construct 1: Preference for localization

Most participants (approximately 39.01%, combining "Strongly Agree" and "Agree") preferred playing mobile games localized into Arabic. However, the vast majority reported they would continue to buy (63.61%) and play (68.59%) video games that were not localized into Arabic. Only a minority, 14.92%, indicated that they would not purchase such games, and a slightly lower percentage (11%) indicated they would not play mobile games not localized into Arabic.

The ANOVA revealed a significant difference in preference for localization based on English proficiency (F-statistic = 22.19, p-value < 0.0001). The beginner group, with a mean score of 9.73 showed the highest preference for localization; the advanced group, 6.76; and the intermediate group, 7.61. These findings indicate that beginners in English tended to have a higher preference for localized games, whereas those with advanced proficiency had comparatively lower preferences.

7.3.3.2 Construct 2: Perceived impact of localization on the gaming experience

The second construct, the impact of localization on the gaming experience, was assessed with two items presented in Table 7.3.

Most of the participants believed that localizations enhanced their gaming experience (44.24%). A more pronounced preference was observed for "Localizing video games makes understanding game mechanics easier," with 64.92% responding positively and only 14.66% negatively, underlining the crucial role of localizations in aiding players' comprehension of game mechanics.

The ANOVA of this construct across different groups' mean scores based on English proficiency (Advanced, M = 6.77; Beginner, M = 7.54; and Intermediate, M = 6.94) yielded an F-statistic of 2.63 and a p-value

Table 7.3 Responses about localization's perceived impact on gaming experience

Items	*Positive*	*Neutral*	*Negative*	*Total Responses*
Localized video games enhance the gaming experience.	169 (44.24%)	114 (29.84%)	99 (25.92%)	382
Localizing mobile games facilitates understanding of game mechanics.	248 (64.92%)	78 (20.42%)	56 (14.66%)	382

of 0.0736, suggesting that the differences in the perceived impact of localization on the gaming experience were not statistically significant. However, it is noteworthy that the p-value was close to the conventional significance threshold of 0.05, indicating a trend toward significance. Participants from all three English proficiency groups agreed that localizations of mobile games enhanced their gaming experience and facilitated their understanding of game mechanics.

7.3.3.3 Construct 3: Localization's perceived quality

The survey showed that the vast majority of participants (35.87%) disagreed with the statement "Arabic localization in mobile games is of high quality" (Table 7.4). A similar number of participants provided a neutral response, whereas approximately 28.27% believed that the localizations into Arabic of mobile games were of a high quality.

Table 7.4 Responses on localization's perceived quality

Statement	*Positive*	*Neutral*	*Negative*	*Total Responses*
Arabic localization in mobile games is of a high quality.	108 (28.27%)	137 (35.87%)	137 (35.87%)	382

The ANOVA revealed significant differences among respondents across English proficiency levels (F-test = 9.33 with p-value < 0.0001). English speakers at the beginner level reported the highest average rating of quality (M = 3.56), followed by intermediate (*M* = 2.84), and then advanced speakers (*M* = 2.74). Players with weaker English proficiency were likely

more appreciative of the localization efforts because they heavily rely on localization and do not have access to English versions to judge the quality of the localization. In contrast, gamers with stronger English skills have higher knowledge and standards that allow them to compare versions and spot discrepancies and translation errors, reducing their perception of the quality of the localization.

7.3.3.4 Construct 4: Localization as standard practice

The participants were asked if Arabic localization should be adapted as standard practice for all mobile games. Table 7.5 presents the results.

Most participants (37.17%) agreed that "All mobile games should be localized into Arabic," whereas 27.49% remained neutral. Furthermore, 35.34% disagreed, suggesting that a significant portion of the gaming community does not view localization as a critical aspect of their gaming experience. Gamers' proficiency in English may be a reason for this negative attitude because with or without Arabic translations, most participants would be able to play the games. As noted above, gamers with higher English proficiency levels are more likely to find that Arabic localizations were not of a high quality, which may play a role in their preference for playing games in English and thus not supporting localizations of all mobile games.

Table 7.5 Responses to localization as standard practice

Item	*Positive*	*Neutral*	*Negative*	*Total Responses*
All mobile games should be localized into Arabic.	142 (37.17%)	105 (27.49%)	135 (35.34%)	382

The ANOVA results indicated significant differences across English proficiency levels (F-statistic = 4.93, p-value = 0.0077). The mean opinion scores for "All mobile games should be localized into Arabic" varied across proficiency levels, with beginners showing the highest mean score ($M = 3.58$), indicating stronger agreement, followed by intermediate ($M = 2.97$) and advanced ($M = 1.19$), suggesting decreasing levels of agreement with standardizing mobile game localizations as English proficiency increased.

7.3.3.5 Construct 5: Arabic language variety preferences in localization

One debatable issue in Arabic video game localizations is whether MSA, which is understood by all speakers and is used in official settings and

media, or colloquial Arabic dialects should be used in localization. The two items presented in Table 7.6 assessed participants' preferences between MSA and colloquial Arabic dialects.

Most participants (46.07%) preferred playing mobile games localized in MSA, while 22.78% were negative, and 31.15 remained neutral. As for "I prefer playing mobile games localized in colloquial Arabic dialects," the participants showed an opposite preference, with the majority (37.17%) not preferring localizations in ALD. However, about 30.89% showed a positive attitude toward colloquial Arabic dialects in localized games, and 31.94% provided neutral responses.

A paired t-test was performed to determine whether the participants preferred playing localized games in MSA or ALD. The paired t-test resulted in a t-statistic of 4.94 and a p-value of approximately 0.000001, a statistically significant difference between the scores. The mean score for MSA was 3.29, indicating that the participants preferred video games localized in MSA compared to ALD at 2.87. Al-Batineh and Alawneh (2022) also reported a preference for MSA among Arabic console gamers; moreover, some gamers reported that they would not play a game if it were localized in Arabic dialects. Game developers looking to localize their games into Arabic should consider such findings seriously. In October 2023, *Spider-Man 2* was released with Arabic localization. The voiceovers and subtitles were localized into Egyptian Arabic, which was not warmly welcomed by Arab gamers and reviewers on social media. Meanwhile, *Assassin's Creed Mirage*, released the same month, was warmly welcomed and anticipated by the region's gamers, perhaps because the developer recruited a well-known Jordanian actor to record the main character's voiceover in MSA.

Table 7.6 Responses on choice of Arabic language in localization

Item	*Positive*	*Neutral*	*Negative*	*Total Responses*
I prefer playing mobile games localized in Modern Standard Arabic.	176 (46.07%)	119 (31.15%)	87 (22.78%)	382
I prefer playing mobile games localized in colloquial Arabic dialects.	118 (30.89%)	122 (31.94%)	142 (37.17%)	382

7.4 Discussion

This chapter provided an overview of the profiles and gaming habits of Arab mobile gamers. The data revealed interesting insights that aligned with the findings of some previous studies in the field of Arabic video game localizations but contradicted the results of other studies, highlighting that gaming platforms might feature different gamers, profiles, and preferences. For instance, the demographics of the participants reported that females dominate mobile gaming, in contrast to console games, which are male-dominated not only in the Arab world but also in other gaming contexts. However, according to data from Circana's (n.d) *PlayerPulse 2023,* 54% of mobile video game players in the United States are female. Factors such as ease of access, variety of games, and ease of downloading and playing at any time or place may have contributed to this dominance.

The data analysis also revealed insights into the Arab mobile gaming community's spending habits, which may help mobile game developers tweak their profit-making strategies. Most Arab gamers do not spend money on mobile games; instead, they rely on free games. Therefore, the freemium model might better fit the context of the Arab region, and revenue can be generated from in-game purchases and advertisements. Wamda Research Lab (2013) published an article on this topic, indicating that free-to-play games with in-app purchases or ad models are likely ideal for generating revenue from the expanding mobile gaming market in the Arab world, where audiences do not tend to spend on mobile games up front. Based on this chapter's results, Wamda Research Lab's (2013) findings remain relevant. However, the limited number of participants in this study makes generalizing the results difficult because market insights have reported that high-income Arab countries such as Saudi Arabia have "high spending power yielding the highest revenue" (*BusinessWire*, 2022, para. 7).

Furthermore, 47.91% of the participants were casual gamers, spending less than two hours a week on mobile games. Only a minority of the participants engaged in more extensive gaming sessions. This aligns with the findings of other studies in the field of mobile gaming, which reported that mobile gamers tend to play in short sessions, often while multi-tasking or waiting (Syvertsen et al., 2022). However, Arab console gamers have different gaming habits, as reported by Al-Batineh and Alawneh (2022), who indicated that approximately 53.49% of console gamers spend more than ten hours a week and that approximately 37.84% spend 11–25 hours a week. The pick-up-and-play nature of mobile games may attract casual gamers; meanwhile, console games require comparatively more effort and stand-alone equipment, making them less conducive to spontaneous play.

The results of localization preferences revealed that most gamers prefer playing games in Arabic because they generally agreed that localized

mobile games would enhance their gaming experience and facilitate their understanding of game mechanics. These findings align with those of Jarrah et al. (2023) who reported that a majority of Arab mobile gamers of *PUBG* and *Free Fire* preferred playing these games in Arabic. In addition, gamers felt more comfortable playing games in Arabic because doing so helped them understand the game's "details" or mechanics (Jarrah et al., 2023, p. 84). However, despite a strong preference toward mobile game localization, the vast majority of participants reported they would purchase and play video games that are not localized into Arabic. This can be attributed to most participants reporting that they were at intermediate or advanced English proficiency levels and that they generally played free games, which often come without Arabic localization. Such games, however, offer accessibility and affordability that could outweigh the gamers' preference for localized content. This scenario provides a key insight into consumer behavior in the gaming market: while cultural and linguistic alignment enhances the gaming experience, the absence of such features may not necessarily deter gamers, especially when other compelling factors such as cost and accessibility come into play.

Despite participants' willingness to play non-localized mobile games, the majority supported the statement that "All mobile games should be localized into Arabic." However, they also generally agreed that Arabic localizations of mobile games lack quality. These findings also align with those of Jarrah et al. (2023) who reported that most of their study participants (71%) agreed that "Localizing video games into Arabic should be encouraged" (85). Likewise, the participants indicated that the quality of the localizations of the mobile games was lacking, highlighting the need for high-quality localization at the linguistic and technical levels.

Notably, this study provided crucial insights into mobile gamers' preference toward the type of localization in terms of the variety of Arabic used. Most participants preferred playing games that were localized in MSA even though some preferred ALD, which was confirmed by the results of the t-test. These findings echo those of Al-Batineh and Alawneh (2022), who reported that Arab console gamers strongly preferred MSA over other varieties of Arabic. The preference for MSA may be attributed to the fact that MSA is standardized across the Arab world, whereas colloquial dialects vary greatly by region. Ultimately, the unified nature of MSA may make it more suitable for games aiming for diverse audiences in the Arab world.

7.5 Conclusion

The data analysis in this chapter revealed key differences between mobile and console gamers' profiles and gaming habits in the Arab world,

highlighting the unique characteristics of each gaming medium within the Arab gaming community. Such distinctions should inform mobile and console game developers' revenue generation strategies because, compared to console gamers, mobile gamers tend to spend less money and time on games. Study results clarified that mobile gamers are generally casual, perhaps due to the pick-up-and-play nature of mobile games and the ease of access they offer. In contrast, console gamers tend to invest more time and money in their gaming experience. This finding is relevant because several mobile manufacturers have highlighted the technological capabilities of their new devices. For instance, Apple has announced the new iPhone 15, which allows gamers to play *Resident Evil Village, Resident Evil 4, Death Stranding,* and *Assassin's Creed Mirage* (Apple Newsroom, 2023). Such games are traditionally associated with personal computers or console gaming due to their long quests and the inclusion of elaborate narratives and detailed plots requiring extensive subtitles and voiceovers that might not suit most mobile phones or casual gamers. How this technological advancement will affect the predominantly casual gamer base in the mobile gaming community remains to be seen. Will these developments lead to a transformation in mobile gaming habits, or will mobile gamers continue to prefer less intensive gaming experiences?

This study concludes that a one-size-fits-all approach to video game localizations, development, and marketing may not be effective in the Arabic video game market due to the multifaceted nature of gaming habits and the diverse preferences of gaming communities on different gaming platforms. Understanding and further investigating these differences is important for gaming industry stakeholders, including developers, marketers, and researchers. In the future, researchers should further explore the landscape of gaming preferences and habits across different gaming platforms with larger pools of participants. Such studies can also seek to understand the reasons for the differences in spending habits and localization preferences between mobile and console gamers to provide further insights into the gaming market. Tracking trends in gaming habits and gamers' profiles over time, considering the technological advances in gaming platforms, may help form informed development and localization decisions that would help developers better tailor their games and their localization strategies to different gaming communities' needs and simultaneously ensure commercial success.

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7.7 Note

1 Immersion, in the context of our research, is the tendency for the gameplay to not be punctuated by unintuitive (construct 1, 4, 5), confusing (construct 2), or lackluster (construct 3) translation – distracting users by directing their attention away from engaging in gameplay and onto its own (in this case negative) presence on their experience.

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