An-Najah National University

Faculty of Graduate Studies

LINGUISTIC CHALLENGES FACING THE LOCALIZATION OF VIDEO GAMES FROM ENGLISH INTO ARABIC

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Dedication

To the Name of Allah, the Most Compassionate, the Most Merciful.

To the sunshine in my eyes, calling me to dance with the skies.

To my respective parents, my beloved mother and father for their generous support, sincere prayers and love, for making me believe that I can be no matter what.

To my one and only sister, Nataly.

To the love of my relatives, friends, and colleagues who have been by my side since the start of my thesis.

To all the localizers and researchers who have always been a good source of knowledge and inspiration in all their previous studies. This thesis is meant to pave the way for researchers to overcome obstacles in the translation of video games

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Acknowledgment

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Many thanks are also due to An-Najah National University academic staff who paved the way for me to complete this thesis. Without their knowledge and teaching, I would not have been standing here in front of everyone holding and sharing the results of my effort.

Declaration

I, the undersigned, declare that I submitted the thesis entitled:

LINGUISTIC CHALLENGES FACING THE LOCALIZATION OF VIDEO GAMES FROM ENGLISH INTO ARABIC

I declare that the work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification.

Student's Name: **Saqer Osama Odeh**

Signature: 

Date: **14/05/2023**

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A LINGUISTIC CHALLENGES FACING THE LOCALIZATION OF VIDEO GAMES FROM ENGLISH INTO ARABIC

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Abstract

For more than two decades, the Arab gaming community has been growing continuously after the vast spread of technological devices. PCs, consoles (PS, Xbox, Nintendo, and so), and smartphones are mostly preferred by young Arabs due to peer pressure. The desire of Arab gamers to play more and more has made developers set up new goals to localize their English language games into many other Target Languages versions, leading to a new field in translation known as video game localization. This thesis has studied the localization of video games, and has provided a look at the Arabic translation process. In addition, it has attempted to understand how localized games are dealt with by their Arabic target audience, and what linguistic challenges they encounter. Using many examples of the community's most popular video games, the researcher has focused on the challenges encountered during the localization process. He dwelled on discussion of linguistic challenges, the relationship between linguistic, cultural, terminological, and technical issues. Then, the researcher suggested possible solutions and better localization terms to show the gap between both the SL and the TL that localization faces, especially if it is not localized by a local translator.

Keywords: Arabic; English; Linguistic Challenges; Localization; Localizer; Video Game Localization; Video Games.

Chapter One
Introduction

1.1 Introduction

Translation, for ages, has been an important tool for connecting communities of different languages and spreading knowledge. According to Jacobson (1958), translation itself has several meanings. It can refer to the general subject field, the product (the text that has been translated), or the process (the act of producing the translation, otherwise known as translating). This thesis will take the video game language field as its main area of translation.

The vast and fast spread of technology has made technical translation a part of daily life. According to Newmark (Newmark, 1981), the technical translator's notion is content. Byrne (2006) states that 'technical' means something related to technology and technological texts. Technical translation is concerned with politics, finance, government, medicine, electronics, and gaming. The term 'technical' is not confined to natural science and technology. Any speciality has its technical terms and its genre-marking characteristics.

Amarasinghe (Amarasinghe, 2020) maintained that technical translation is observed more as potentially non-cultural i.e. universal. Moreover, the advantages of technology are not exclusive to one speech community but all.

One of the fields of technical translation is gaming. The gaming community began to expand larger than ever around the world, attracting the attention of people and young people in particular. The category of gaming includes many fields such as action, shooting, adventure, and mystery. Many people have become a part of this community, and that has led to the creation of a whole new virtual world called "the world of gaming". With the spread of this community across countries and communities, a new language has emerged: the language of gaming. For that reason, the gaming community needed experts to make gaming dictionaries or even manuals that include terms in different languages to make video games easier to play and accessible to all users across the globe.

Hsu (Hsu, 2018) found that the gamers' spoken language varies depending on whether they were talking to another gamer or a non-gamer. Gamers adjust their vocabulary from

much more common and accessible terminology to a more specialized terminology depending on the listener's video game knowledge and experience. This claim proves that if a non-gamer hears a term that they are unfamiliar with, they will not understand what it refers to unless they become directly engaged within the community of gaming.

This thesis has addressed the linguistic challenges that face the localization of video games from English into Arabic. The lack of dictionaries specialized in the translation of video games language might pause many linguistic challenges and even affect translators' quality of work. Translators might not be able to find appropriate meanings in ordinary dictionaries due to lack of experience and knowledge of gaming terminology.

Within the gaming industry, the demand for localizing games started to increase. Localization includes taking a certain product and making it, both on the linguistic and cultural levels, appropriate to the target locale (country/region, traditions, religion, culture, and language) where it will be marketed, sold and used (Fry, 2003).

This thesis focuses on the linguistic challenges and errors that face the localization of video games. According to Al-Batineh (Al-Batineh, 2021), the localization process requires much more than "text-to-text translation". It must take into account the socio-cultural, religious characteristics of the target market and subsequent adaptation of the game to the target culture. These two categories are discussed as subsections under localization and errors like accuracy, linguistic and terminology errors as well as stylistic errors, typos, etc.

1.2 Purpose of the Study

This study has four aims: shedding light on the difficulties encountered in the localization of video games, highlighting the process, by providing examples from a number of famous games, setting boundaries between video game localization and other models of translation and exploring the distinctive challenges of localization and ways of overcoming them.

1.3 Questions of the Study

- What are the difficulties that may be faced while translating textual material within different games?
- What is the relationship between textual and non-textual material that may originate challenges while localizing video games?

- What are the linguistic challenges and errors that face video game localization and can they be overcome and fixed respectively?

1.4 Statement of the Problem

It has been noticed that almost a lot of the gaming terms that are used within the gaming community are usually either borrowed from English. That is, they either transliterated (transferred) or translated into the TL.

Many English gaming terms are used as they are in their original form without rendering them into Arabic because they have no equivalents. Such borrowed terms are considered Arabic terms because of their deliberation within the language. The main problem related to the inability of non-gamers to give a translation for the gaming terms is due to language inexpertness in entertainment technologies and video game language in particular. In addition, their inability is also due to the lack of specialized dictionaries related to gaming terminology.

Many non-gaming community members neither use such terms nor understand their meanings. As a result, this affects the knowledge of gaming language understanding since ordinary people will not understand the function of such terms in the newly produced games, especially the ones that have a huge fan base.

Furthermore, localization isn't only limited to the translation of textual materials within games, but it also extends to the non-textual material. In many cases, some games do not take these points into consideration, and this does not always necessarily meet with gamers beliefs thus making them react negatively to the game. For example, some non-textual materials might seem offensive to some religious groups' beliefs. This accordingly makes them react negatively to them.

1.5 Significance of the Study

Even though there's an extensive use of oral and written English gaming terminology within the gaming community, the problems concerning the translation of the English video games language into Arabic have not been tackled properly yet due to the lack of dictionaries for the modern and newer gaming terms in Arabic.

In addition, this study can assist translators as well as localizers who are likely to be interested in such a field but lack the necessary knowledge of the English language.

1.6 Methodology of the Study

The study has used qualitative approaches to ease analysis and answer its questions. Therefore, the existing terms and their translations are used in the same manner as they appear in video games in order to interpret the findings. The study has also provided an outline of the different steps taken into consideration to implement the localization of video games for the Arab communities and fix the various linguistic errors and problems facing them.

Data collection includes games that have a vast fan base such as CS: GO, PUBG, Call of Duty, and League of Legends. This is in addition to resources related to the topic and taken from translation books, and gaming community platforms such as Twitch, and Discord. Samples have been selected and compared between both the SL (English) and TL (Arabic). Textual materials have been included to make a suitable base for the thesis to elaborate more on it to benefit future researchers.

The analysis of the material has highly depended on the comparative approach: That is, the analysis has been employed to break down the textual material collected from the games in its original ST within the community and its equivalent TT within the TL community.

As stated earlier, this study has focused on the linguistic challenges and errors that face video game localization.

1.7 Main Concepts: Technical Translation, Localization, Video Game Localization

Localization

Localization means “translating the language assets in a text into another language” (Chandler & Deming, 2011). The process of localization to gaming companies focuses on the process of transferring the linguistic assets of texts (Al-Batineh, 2021). Bernal-Merino (Bernal-Merino, 2014) explains how the concept of the localization process does not only involve a translation since it also conveys other aspects: “The term “localization” as used in commercial translation, is the process of making a product linguistically, culturally, technically and legally appropriate to the target country and language.”

Successful localization of any software product, whether it is a computer program, a website, or a video game, relies on a continual process known as GILT (Globalization, Internationalization, Localization, and Translation). This will be discussed later.

Videogames Localization

Within the gaming industry, the demand for localizing games started to increase during the last two decades. The localization process includes taking a certain product and making it, both on the linguistic and cultural aspect, appropriate to the target locale (country/region, traditions, religion, culture, and language) where it will be used and sold (Fry, 2003).

1.8 Structure of the Study

This thesis falls into four chapters:

Chapter One begins with the introductory section. Then it moves to the main problem of the study, its aims, significance and questions.

Chapter Two is devoted to the review of literature and discussion of the video game translation and its progress.

Chapter Three is devoted to the analysis of data and discussion of its results. It analyses the localization process of video game language and highlights the challenges and errors that face the translation of gaming. The chapter caps with some suggested translations and solutions.

Chapter Four covers the findings of the study as well as recommendations for translation and localization of video gaming terms.

Chapter Two

Review of Related Literature

2.1 Introduction

In the light of localizing video games, neither a lot of researchers nor a lot of scholars have given due attention to the translation of video games. Video game localization is a newly updated translation field that belongs to audio-visual translation. Video game localization is not only related to transferring a text from one language to another since several different agents need to perform an adaptation to give a completely appropriate translation but it is also related to both cultural and local matters (Al-Batineh & Alawneh, 2021).

Unlike all the entertainment products of literature and amusement, video games have a short history. For decades, entertainment products have given pleasure and delight to those who seek attention and interest in them. Video games are considered a tool of interactive entertainment with a vast market share. This success is connected to the story mode which is adapted within most video games. This proliferation has opened a new profession in the world of entertainment which has led in its turn to making video games more appropriate for a variety of linguistic, political, cultural, historical, and ethnic communities. This making of video games for these communities is known as localization. Many scholars, like Bernal-Merino (2007), Al-Batineh (2021), and Chandler (2014) have tackled video games as one area of research.

Chapter Two traces the development of the video game localization history, including the first attempts, mistakes, and solutions found in terms of classification of video games and dealing with them.

2.2 Birth of Video Games

Gaming companies emerged in the last fifty years. Many gaming consoles have led to the creation of gaming community the likes of Atari, Gameboy, Nintendo, Xbox, PlayStation, and Gaming Pc.

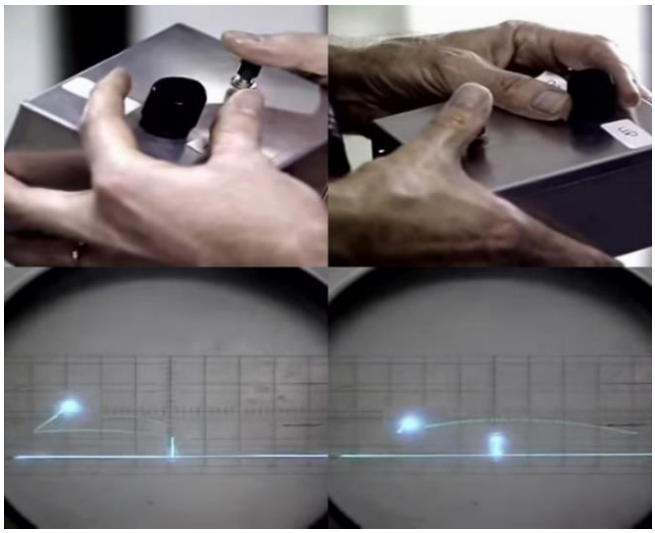
The history of video games goes back to October 1958, when William Higginbotham, a physicist at Brookhaven National Laboratory, created the very first electronic game. It was a very simple tennis game similar to the 1970s Pong game. During annual visitors'

days, held in Brookhaven and attended by thousands of people touring around the lab, Higginbotham was in charge of creating an exhibit to show off the laboratory instrumentation division.

Higginbotham had done some designs, drawings, and blueprints. He and Robert Dvorak spent two weeks on building this device. The game was called “Tennis for Two”. Two players with two adjustable knobs control the angle of the ball and push a button to hit the ball to the other player’s area (Brookhaven National Laboratory, 2008):

Figure (1)

First Video Game Ever



The game was based on reduced limited function. In other words, this game only included little text materials compared to nowadays video games which are more developed with a more heroic storyline that includes rich graphics and conversations. These materials created the need for a fully acceptable product for the players to engage with, and an essential component for the success of a game.

2.3 History of Video Game Localization

Hasegawa (Hasegawa, 2009) proposed an advanced trace of video game localization development. He divided this development into five phases: early phase (the 1970s to mid-80s), the growth phase (the mid-80s to mid-90s), development phase (the mid-90s to late 90s), maturing phase (2000 to 2005), and the advancing phase (2005 to date).

According to Bernal-Merino (Bernal-Merino, 2006), in the early phase, the original video game industry was developed to be consumable by the US and Japanese communities. Many video games would in some cases reach other countries in their American English or Japanese versions.

Later, the Japanese developers realized the need to expand their investment returns abroad by expanding their video game market (Bernal-Merino, 2014). It can be claimed that the first attempt at localization was established in Japan, but it was more complicated than nowadays due to the situation in Japan at that time after WWII.

According to Kohler (Kohler, 2005), the 1970s gaming technology achieved better-looking animations than the first ones. As a first attempt to localize video games, the Japanese started by considering the linguistic conversion. Then, U.S. English video game companies took real care of exporting their products and even took into consideration translation attempts of at least the user manual, but leaving the game software language as it is in the original game. For example, the Atari company, which was dominating the markets of gaming at the time, attended to localizing their user manual into many languages (1972):

Figure (2)

Atari's Localized User Manual.

Another example of the earliest attempts to localize video games was the Pac-Man game (1981). The game contained a small number of words to be translated. The original Japanese game “Puck-Man” opted for the attention of the Americans but represented an unexpected challenge. The Americans thought that the original name was risky due to it being connected to their language puns. Instead, they applied a strategy of limiting the name making it three main characters instead of four by replacing “Puck” with “Pac” (Dodaro, 2014). The following is a comparison between the Arcade game flyers in both the original and its localized version:

Figure (3)

Comparison between the Original Japanese Puck Man and Its Localized Version

According to Bernal-Merino (Bernal-Merino M. , 2014), the original version never displayed any Japanese text; it was programmed in English. In the original “Puck-Man”, the four ghosts had their names transliterated into Japanese words and phrases. Instead, American localizers decided to add their touch to the mixture to make it more open for US players to deal with. All the game characters had names of their own and nicknames describing their behaviors or colors. The following is a list of the transliterated Japanese character names and their English translation:

Figure (4)

Puck Man Japanese Character Names and Their English Localization

This localization procedure contains the essence of games as customizable entertainment products for foreign markets and matches perfectly with the development process of the global market. Dodaro (Dodaro, 2014) believes that it is important to notice how some particular solutions seem somewhat distant from the original sense, and how faithfulness to the text is sacrificed in a way to recreate a humorous effect as seen previously.

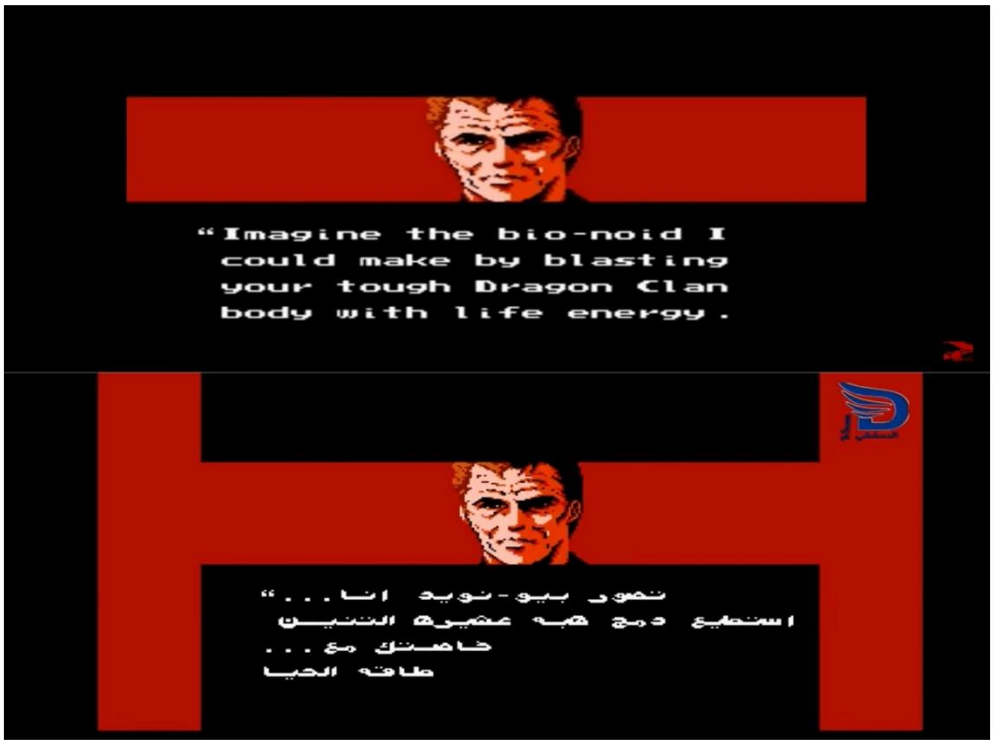
During the growth phase, the establishment of the gaming industry paved the way for the game localization industry. By the end of the 1980s, the interactive entertainment industry was back strong and was making profits (Van Ettinger, 2014).The shift in video games brought with it an increased capacity for game consoles that could contain a larger amount of data, and, thereby, more content to translate (O'Hagan & Mangiron, 2013).

With the emergence of the home consoles offered by Sega Genesis and the Nintendo Handheld Game Boy, there was a noticeable increase in quality (Bernal-Merino M. , 2014). One of the very first attempts to localize video games into Arabic was on the NES (Nintendo Entertainment System). A game called ***Ninja Gaiden*** (1988-1991) was created by the Tecmo Theatre industry. According to Kohler (Kohler, 2005), the game was known

for its innovative use of a well-prepared storyline and a creative cinematic sequence. The following is an example of the translated text the game contained:

Figure (5)

A Comparison between Ninja Gaiden English and Its Arabic Version



The game showed a newly formed connection set between the localization process of video games into Arabic and the translation of audiovisuals. The connection can be traced back to 2003. The video game sequence includes pixelated pictures in a 3x4 aspect ratio (Cassidy, 2023). The displayed dialogue in the original was in English. Even though the Audio does not include any verbal sounds, it still includes machine-written texts in a synchronized graphic.

According to Karamitroglou (Karamitroglou, 1998), this example reveals that the text materials did not follow today's subtitling treaties when it comes to fragmentation and the length of lines. As seen above, the text is extended to four lines instead of two according to modern AVD norms. The example also shows a clear mispronunciation. The word "Life Energy" was poorly translated into Arabic. When an Arab reads the translation "طاقة الحيا", it will not be understood in the same manner as the original. The word "الحيا" is missing the letter "ة/التاء المربوطة". The word "الحيا"in everyday Arabic means "Snake" which makes it far away from its original context.

The development phase started and with it came a massive drop in the localization quality (Dodaro, 2014). Despite companies starting to adopt partial or full localization models, both the development and the localization processes were still considered totally separate fields. Development teams, apart from localizers, were neither trained nor prepared to understand the localization process and its requirements. Translators found themselves technically vulnerable. According to Kohler (Kohler, 2005), the available text capacity was designed in US and Europe for native speakers of English. This forced them to decrease translations to other languages to the point of creating a considerable amount of meaning loss.

To make things worse, English video games contained text files that needed replacement. Replacing the former with a translation, therefore, was impractical, owing to format incompatibility, and could only be rearranged by reprogramming the game entirely (Kohler, 2005).

The concept of internationalization was yet to be developed. Internationalization refers to abstracting the functionality of a product away from any particular language so that language supports can be added back in simply, without worry that language-specific features would pose a problem when the product is localized (Fry, 2003). Furthermore, internationalization seemed to pave the way for localization at a technical level, getting the software ready to host other languages than the ones spoken by developers (Esselink, 2000).

Still, it was hard and would take a long time before programmers started to put plans for their work with the localization process in mind for future technical adequacy. Even when Sony's Computer Entertainment system "PlayStation" was introduced, the situation did not improve.

In 1994, Japan's own Sony Computer Entertainment (SCE) Inc. introduced the PlayStation (PS) Console. The console took advantage of the 640MB higher capacity of the CD-ROM and the 32-bit system at a price that suited the pocket. The added space was operated by better-looking graphics and high-quality soundtracks, but with no real advantage granted to translation.

Corliss (Corliss, 2007) says that due to technological and financial as well as the lack of proper localization process and professional talent involved in it, the growing pains of a nascent games industry were represented.

Bernal-Merino (Bernal-Merino, 2006) stated that during that period of the early attempts to localize video games, the 80s-90s were known for producing a considerable amount of poorly translated games which were catastrophic. One of the most frequently cited examples is PlayStation's Pepsi Man (1999). After its release, it became one of the most playable games in the Middle East. The following is an example taken from both the original game and its localized version:

Figure (6)

Pepsi Man Video Game and Its Arabic Localized Version

The localization of many games, during this period, according to Langdell (Langdell, 2006), achieved a high voltage for the terrible word choices throughout the game. That often can be noticeably hilarious. Pepsi Man (1999) showcases identically poor translations such as "استارت"/"حفظ"/" تحميل"/ "اختيارات"/ "بدء اللعب".

Next comes the maturing phase. The maturing phase was characterized by promising changes and effective technological advances. The 21st century was the start of PC evolution. Microsoft created Windows and companies, such as Intel, Compaq and IBM,

introduced computers with a higher speed and memory capacity for texts by installing 32-bit increasing it by 100 megabytes (Britannica, 2020).

Video gaming machines moved from CD-ROM to DVD-ROM with implicitly much bigger storage capacity for textual material. Despite this, textual fragments compacted in software (strings) were still affected by text length restrictions, graphics, and audio files which grew heavy in terms of memory occupied (O'Hagan & Mangiron, 2013).

In addition, one of the most noticeable advances in game technology was the use of sounds and movies (cut-scenes) within the games (Dodaro, 2014). One example was the games produced by AAA video gaming companies, namely those titles with high production budgets involving substantial resources such as Rockstar Games (1998), Capcom (1979), and Konami (1969).

Hasegawa (Hasegawa, 2009) says that closer attention became necessary during this period to achieve a more accurate localization of both the subtitling and the dubbing level of dialogues. The market, moreover, became wider with more small companies interested in the localization process of video games. This shed light on the possibility of making a profit out of it with increased competition and small budgets. Characters were now portrayed in high facial expressions and appeared more detailed and dialogues were voiced by professional voice actors, triggering substantial progress for translators. Lip-synching became something to work with, which led to more accurate translations.

The following is an example taken from Konami's best-selling game Silent Hill 2 (2001):

Figure (7)

Silent Hill 2 Video Game and Its Arabic Localized Version

According to Al-Batineh (Al-Batineh M. , 2021), the lack of subtitling conventions is not only an issue in video game localization in Arabic but in other languages as well. However, the Arabic language nature makes this lack more critical. While English includes capital letters to denote proper names, Arabic does not. In the previous example, "Silent Hill" is a name of a place where the game actions take place. Localizers had problems while dealing with it and were confused about what to do. They later decided to keep proper names as "سايلنت هيل". They are in the SL aka transliteration. However, this was problematic for gamers who did not speak or read foreign languages.

Finally, the advancing phase was introduced. It has confirmed the fact that the gaming industry is a profitable and thriving business of the 21st century. Hasegawa (Hasegawa, 2009) admitted that this sector had flourished and seemed not to resent the economic crisis of the last ten years between 1999-2009. He added that it was enough to know that TLs classically exceeded more than 10 languages, including European, Middle-Eastern, and Asian Languages.

The year 2005 saw the arrival of the newer 7th generation consoles such as Xbox, PSV, Nintendo Switch, and Wii. They became easier to be used and owned with the possibility

of being connected to the internet through entertainment. These generations compared to the previous ones offered more storage capacity with better graphics and even a great concept.

Dodaro (Dodaro, 2014) reported, in a similar manner, that the teams working on a game project expanded and became larger involving several hundred experts. Experts included programmers, graphic designers, marketing experts, animators, producers, game designers, and localizers among many others.

Thus, localization has walked up the ranks of gaming production and AAA titles in particular. However, tighter plans resulting from the pervasive application of sim-ship models have made it all more challenging for localizers to keep up with the aggressive pace.

Dietz (Dietz, 2006) referred to the emergence of a new method of localization called Sim-Ship. It deals with shipping games simultaneously with their original without mentioning that the game was still under development to the localizer to make him observe a strict deadline. The game shipments were sent out to numerous TL versions of the products and later led to a larger software publisher to adopt designing the global strategies to facilitate all aspects of the entire process.

Dietz added that the localization process began with the first release of the Game's beta version. This means that the work on the language started at that point and excessive effort and work were put in by the localization team who would usually work under great stress devoting their time to creating and fixing foreign-language versions suitable for the target-audience (Dunne , 2006).

The following example is taken for Play Station's 2 game: Uncharted: Drake's Fortune (2007):

Figure (8)

Uncharted: Drake's Fortune Video Game and Its Arabic Localized Version

In the previous example, a huge noticeable change happened. According to Van Ettinger (Van Ettinger, 2014), the enhanced hardware capacity of the 7th generation consoles also opened the way to an increased volume of game content, graphics, textual material, and audio. They all became part of the localization process. The game included rich storytelling and expressions and the subtitles followed the guidelines of subtitling video games. The subtitles took a professional type of translation and were displayed longer on the screen.

Van Ettinger (Van Ettinger, 2014) added that the two versions were identical in their execution. The shift in the TT as seen above was the use of an ellipsis while ST used a hyphen instead. At the end of the sentence "...لا الكاميرا"made no sense why it was used. The reason for that could be the difference in conventions concerning the symbols used at the end of sentences to indicate a cut-off sentence. Such examples were seen a lot during this period.

According to Bernal-Merino (Bernal-Merino M. , 2011), one of the most significant changes to the localization of video games was the success of online games at the end of the 20th century, and MMOs (Massively Multi-Player Online games) in particular. Players got attracted to interacting online with other people around the world by playing games in Player Vs Player games or Battle Royal mode. Bernal-Merino (Bernal-Merino M. , 2011) added that the great advancement of MMOs was not that they allowed thousands of players to interact in a virtual world, but the fact that game creators had the ability to collect accurate information about the gaming style and language interactions between each other.

Dodaro (Dodaro, 2014) considered the accuracy of localization, as rendered in the TL, one of the main challenges in translating video games and MMOs in particular.

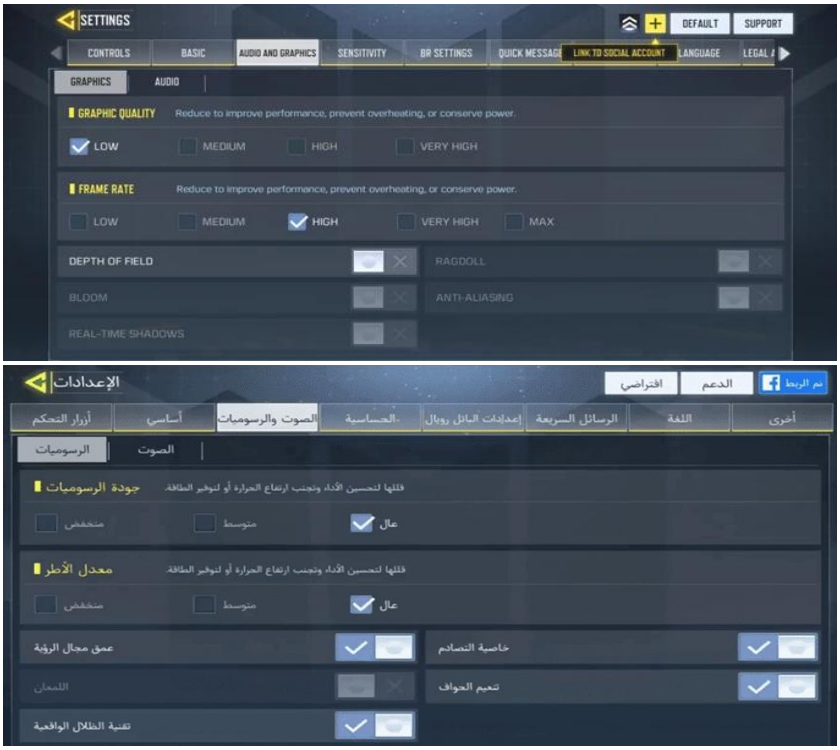
According to Newmark (Newmark, 1981), accuracy in translation reflects a maximum degree of correspondence between both the referential and pragmatic aspects: the text as a whole including its various units of translation and on the extra-linguistic level as well.

The first refers to the situation when both SL and TL words refer to the same thing in the real words, and it is also referred to as denotative meaning. The other refers to the SL and TL words having the same effect on their respective readers, and it is also referred to as dynamic meaning (Hatim, 2013). In other words, both referential and pragmatic meanings are connected to each other. If the first is missing, the other will not achieve its purpose and vice versa.

In the gaming community, numerous games have many mistranslations. That is due to the wrong choice of equivalence chosen by the game localizer. Therefore, when many terms are being read in the TL, they won't achieve the same equivalent meaning as it is in the SL. The following is a sample taken from Call of Duty: Mobile. The sample shows differences between both the SL (English) and its TL (Arabic) within the game settings translation:

Figure (9)

Call of Duty: Mobile Settings Layout and Localization



According to Khuddro (Khuddro, 2018), in many situations, audio-visuals include numerous mistranslations and a wrong choice of word equivalence. The previous example taken from the game settings list highlights the inaccuracy that one may encounter in in-game text if the localizer missed out on the intended function of the user interface element. It also highlights the unnatural Arabic structure due to sticking to literal translation.

Phrases such as “graphic quality” and “anti-aliasing” are poorly translated missing the intended function of the accuracy elements. It appears as if the localizer had little experience considering the translation of Arabic. The localizer took the closest meaning according to their understanding. Instead of translating it as "الجودة التصويرية"and "صقل الحواف", they chose words that were a little bit hard to be understood like "جودة الرسوميات" and "تنعيم الحواف".

Since 2011, the 8th generation of gaming console successors and video game evolution has been witnessed. Consoles like PlayStation 4 and Xbox One sprouted in the gaming markets with high sales in 2013. Sony later released a more updated version of its console,

called PlayStation 4 Pro in 2016. This console was the first of its own to feature a 4k video resolution making the gaming experience more realistic than ever. Microsoft later followed its rival company and released its Xbox One X in 2017 (History Editors, 2017). With the emergence of more new and improved consoles, localization is even more needed. In order to introduce its new technologies, gaming companies started giving more attention to the localization of games in the Middle East in particular. Companies gave attention more to subtitling and lip-sync methods. The localization of audio-visuals depends not only on the inter-lingual (subtitling) and intra-lingual (subtitling for the deaf) but also on the inter-semiotic transfers (Chaume, 2018)

Audio-visual translation shares many characteristics with game localization. Audio-visual translation refers to the process of transferring a text from one language to another using the verbal components contained in audio-visual works and products like TV programs, films, and video games (Chiaro, 2012).

In this respect, localized games are mostly either subtitled, dubbed, or both. Even though most gamers who hail from Arabic countries prefer dubbing for games, still developers see subtitling as a more attractive choice (Gambier, 2003). The following are examples taken from the famous award-winning game: Detroit: Become Human (2018):

Figure (10)

Detroit: Become Human Conversation Comparison

During the development process, The Studio Developers Quantic Dream' applied the dubbing technique by giving a copy of the game to an Arabic localization company. According to Riaz (Riaz, 2017), David Cage, the writer and director of the game during his attendance at Gamers Day in Riyadh, revealed that the game would support the Arabic dialect.

In partnership with Sony Entertainment Middle East, the dubbing technique took the Egyptian Arabic dialect. Dubbing is a technique used to translate foreign films, short videos, plays, and video games. A substitution of ST actors' (English voice) voices in translation with a new TT voice (Arabic voice for example), was introduced in an attempt to synchronize the original lip movements with the TT sounds (Hatim & Munday, 2004).

Chapter Three
Data Analysis

3.1 Introduction

This chapter is devoted to video game localization. The chapter begins with an analysis of the acronym GILT and its relationship to the video game process. This is followed by an explanation of video game localization features. After that, the chapter details the video game localization process and holds a comparison between localization and video game localization. The chapter concludes with a discussion of linguistic challenges and errors faced in localization, and suggestions for overcoming and fixing them respectively.

3.2 GILT Business and Video Games

In order to understand what video game localization is, it is important to understand what localization is in general. As mentioned in chapter one, localization involves taking a product and making it linguistically and culturally appropriate to the target audience where it will be marketed and sold (Fry, 2003).

According to O'Hogan and Mangiron (O'Hagan & Mangiron, 2013), video game companies follow various procedures when exporting their products overseas. Publishers and developers follow the term GILT when processing it. The following terms will be discussed and analysed in terms of their relationship to the video game localization process.

Bernal-Merino (Bernal-Merino M. , 2011) believes that localization goes side by side with globalization. Both terms were used long ago within the business and global world of economics. Al-Batineh (Al-Batineh & Alawneh, 2021) says that thanks to globalization and the internet, the video game developers and publishers are able to enter new markets by localizing their video games into other languages.

In globalization, companies assess the chances of marketing and exporting their products beyond the local market. They take into account many aspects such as financial methods and target audience while studying both their perks and drawbacks. One big name that is most famous is the Assassin's Creed franchise. It has a series of games which consider many factors such as the game history and places of its success. Companies take the cultural dimension as well. When localizing a video game within a community, cultural

issues, such as religion, and traditions are taken into consideration. Companies take these issues into account because they are culturally sensitive.

For a successful localization process, video game developers are called on to associate themselves with an international approach. Internationalization is the next move in the GILT process. It occurs once the video game developer companies have agreed to export their product to one or more foreign countries.

According to O'Hagan and Mangiron (O'Hagan & Mangiron, 2013), the 'localization-friendly game development process includes developing a video game with the aim of localizing it from the beginning. Fry (Fry, 2003) maintained that the process involves disarming the functional side of the product from any language so that it supports adding language-specific features simply without worrying whether the product would pose a problem or not when localized.

In other words, internationalization is the process of creating a product that can be easily adjusted for publishing in other countries without the need to change the product's interior.

Furthermore, O'Hagan and Mangiron (O'Hagan & Mangiron, 2013)pointed out that the process of internationalization is more concerned with socio-political and socio-cultural barriers in getting the original product ready for the localization process. People living in a specific region may be governed by a specific set of linguistic, political, cultural, and social rules. Companies must consider those rules while dealing with marketing games and so on.

After both globalization and internationalization occur, editors advance to choose a suitable localization model to apply it to the video game. As one can see, the GILT process has four models of localization. These four models are the sim-ship model, the post-gold model, the outsourcing model and the in-house model. All of these models will be taken into detail.

The first is the sim-ship model. This model deals with simultaneously shipping games with their original copies without informing the localization team that the game is currently still under development in order to make them set an exact deadline for their progress. That is, the game development process and localization usually occur in

correspondence with each other for the aim of realizing both the original and localized game at the same exact time.

The average lifespan of a video game is extremely short. For a game title to end up being sold either at a discount or a giveaway after its release, it would take only a few months to be done. Still, this model has a troublesome consequence. The localizer has to deal with shaky content and information, which are always changeable throughout the duration of the game-making process. This involves synchronization between the game development team, localizers, and localization team to entail the translation process of the linguistic materials before it starts.

Although this model would be good in many cases, the localizers would face excess pressure of having to perform the assignment without directly being able to inspect or experience the game atmosphere and have only to translate a group of sentences whose context is not necessarily always affordable. As a result, localizers repeatedly have to work with unfinished non-functional gaming materials.

The second is the post-gold model. This model is the opposite of the sim-ship model. The process of localizing a game starts after the original version has been completed (Mangiron, 2020). This model allows the localizer to complete the localization after a year or less of its release in the market. The localizers work on a finished game. This gives them the chance to work/play to gain sufficient knowledge about the game structure, language, text, and atmosphere. It helps the localizer to deliver, without a doubt, fancier translations than the previous model.

Though it is one of the best models, still it faces a problem. Foreign gamers need to wait over a longer time frame before the game becomes available in their own languages. Before that, gamers would lose their patience and start going after the original copy or even resort to buying it from black markets. After all, video games have a short life. That is why publishers would more and more go for the sim-ship release.

According to O'Hagan and Mangiron (O'Hagan & Mangiron, 2013), the last two models in particular are related to the participants who perform the process of localization. To start with, the outsourcing model is assigned to an outside, professional supplier. The supplier is provided with the linguistic content of the video game in a text-only sample

without any experience with the gameplay itself. The localization process goes beyond simply converting linguistics. That supplier selects the localizers who will engage with the project. He also organizes the matching of the screenplay for the audio in a special production studio taking into consideration the quality of the game.

The localizer still faces many challenges while working with an unstable text that undergoes changes during the localization process. This implies that translating game files would sooner or later not be used and in other cases, they would need reconstruction of the translation as a result of changes that occur at the last minute on the original video game.

In such circumstances, the localizers ought to depend on their common sense to cope with their gaming culture. They are expected to make a smart guess of what the text is and the flexibility of translation according to different types of context imagined by the localizers. According to Dietz (Dietz, 2006), this process is described as “Blind Localization”. This situation is subject to improvement in case the authorized localization staff are familiar with the gameplay experience.

Translators who usually work with small production companies are left all by themselves fumbling around in a situation that will profoundly lead to mistranslations, misunderstandings, and confusion all led by helpless attempts to include as many textual elements as possible. O’Hagan and Mangiron (O'Hagan & Mangiron, 2013) maintained that “when different translators are assigned to different parts of a game, they do not have any access to the other files, and cannot consult with one another, thus leading to an unfinished product”.

In contrast, the in-house model gives localizers a chance to work alongside the game developers, who usually nominate localization supervisors responsible for the communication between the translators and the game development team. Companies such as RockStar and Ubisoft opt for the in-house model, in general, to have localization departments in their headquarters. As opposed to the other models, localizers have full access to the original game. They are readily familiar with the gaming experience, storyline, character traits, and the way the game mechanism works. In this case, localizers are less vulnerable to making translation mistakes since the video game context is already affordable.

As mentioned before, every two models align to work together. The sim-ship and the outsourcing models frequently work in pairs while the in-house harmonizes with the post-gold model in those localization companies that deal with the high-quality of their video game material as a valuable element. They prefer to take their time before releasing their own creations for foreign players to enjoy. Despite this, different combinations nowadays are more flexible to achieve but still characterized by continuous trials and errors.

3.3 Video Game and Software Localization

Software localization includes the process where computer applications are analyzed and modified to meet the requirements or expectations of different markets. It has become an interest to international customers and different users of computers. They have come to look forward to understanding software in their own language in the same manner as they talk. This matter can relate to users' productivity and performance. A fully adequate user, to take into consideration a software product, will have more skill and knowledge in dealing with it without encountering any problems. That is, software applications have become more preferable according to the users of language and culture.

Video game localization along with software localization share similar characteristics. Both types of localization involve merging language, translation, IT, and software where a chain of translated sentences needs to be set within the game software. Another similarity lurks in sharing the Sim-Ship model objectives. Video games as well as software take a product that is usually in English and releases it on the same date as the localized versions. As mentioned before, this model is accepted in the localization field today but has consequences for translation. The translator still has to deal with an unstable material that could be exposed to change during the process of localization. However, video games and software localization have a number of differences. Functionality is a main key priority of software localization. In contrast, video games can only be achieved by maintaining a high level of creativity while keeping it as original as possible.

3.4 Video Games Localization and Audio-Visual Translation

As mentioned earlier, video game localization and audio-visual translation share several characteristics. Nowadays, most localized games now are either dubbed, for example, "Detroit: Become Human" (2018), or subtitled, for example "Uncharted: Drake's Fortune" (2007), or both like "God of War: Ragnarok" (2022). Most games are originally

released in English and are either dubbed or subtitled into other languages like European languages (French, German, Russian, etc…) or Known Asian Languages (Japanese, Chinese, Arabic, etc…). Most gamers nowadays prefer the dubbing technique as shown in movies and television dramas. However, developers seem to be more attracted to subtitling. They think that dubbing a game would take too much time, and effort, and would be a heavy financial burden. Regarding the dubbing process, it is pretty similar to dubbing a movie. When translating a script, many factors should be taken into account like the time limit in which each sentence is spoken in addition to the synchronization process of translation along with the lips movement which will later be professionally recorded over the movie by voice actors.

From another perspective, subtitling games is on a whole different angle than audio-visual translation customs used for subtitling movies. For example, most dubbed games present intra-lingual subtitles while only those that have not been dubbed are presented with inter-lingual subtitles and that gives the gamers the opportunity of controlling the subtitles by being able to pause or restart the subtitles while they are playing.

In today's games, gamers have the ability to access game manuals, instructions, and different dialogues from the main menu or the pause menu at any time during the gameplay. On the other hand, the semantic units in subtitling a game are not given as much attention as is the case with films. Character's speech and dialogue are divided into two or even more rows of subtitles i.e. not certainly following the rules of the semantic units. Besides, the space of subtitles length available is maximized by measuring it by pixels instead of the number of characters. Therefore, localizers are supplied with custom-built programs that enable them to inspect the length of subtitles on a gaming screen.

3.5 Characteristics of Video Games Localization

In the trade context, video game localization relates to every different process engaged in transferring a well-developed video game software into a fully-equipped video game for sale in the target region market (O'Hagan & Mangiron, 2013). These changes are a result of differences in linguistic, cultural, and technical effects that control the target player platform.

Video game localization encountered its own set of challenges that video games are not merely considered functional but only considered as entertainment products for

amusement. Video game localization also goes beyond the translation of the user interface to include more textual and non-textual elements.

The user interface (UI) in video game localization is very detailed with a packed main menu full of options for controlling the game feature. Those features include the game difficulty level, controls key panel, gameplay settings, graphics and display, and audio settings. Video game localization is a complicated quest. It includes text, graphics, video, and audio. The user interface, storyline, materials, and content are all added challenges that may need modification in order to meet cultural and legal criteria.

3.6 Localizing Video Game Assets

Any video game consists of various assets that need to be localized. The video game localization assets are divided into five categories: in-game text assets, cinematic assets, artistic assets, audio assets, and printed assets. All these assets are related to localization to be built and organized within the game in order for it to process smoothly without any problems that computer products usually encounter such as crashes or bugs.

3.6.1 In-Game Text Assets

The in-game text (On Screen Text – OST) refers to all text types that are included in the user interface system. It often consists of short text fragments game menus, tutorials, and help messages that are not narrated and are only displayed in written form. The UI text usually has an informative function for a smooth transition in gameplay. The following is an example of a translated user interface taken from Square Enix's award-winning game The Shadow of the Tomb Raider (2018), see appendix (A).

Every video game translation involves the translation of a video game manual. In some cases, video game companies take manuals to a second translation agency, which is logical in some way. At this phase, the video game is completed, and the manual is not as important as the rest of the textual materials relatively speaking. So, companies can, therefore, ask smaller and less expensive agencies to translate the texts using in-game text as a reference. The translation of such text is not easy. The text includes special terminologies (button functions, error messages, etc...) that need to be functional according to the console company system. The position here lies in having to explain the main UI function (same as in manuals) without having played the video game before.

Like in manuals, the UIs central idea is the explanation of information. Some of them mostly list things that one can and cannot do within a video game.

The text follows the translation of this text is characterized by brevity. It is due to the space constraints put in the development of the game screen. It is also marked by the easy use of the text by users and its clarity. When translating such texts, it is advisable to take translation strategies into consideration. To address space constraints, pragmatic and functional choices need to be applied in order to come up with creative solutions to overcome these constraints and to almost reflect a tense feeling which is always characterized by lively in-game text in terms of expression and names of certain entries. As shown previously, the example takes good care of space constraints, and it gives a creative professional translation.

The localization team took into consideration putting both effort and time to make the UI assets localization at their best. The text translation follows the word-for-word technique. The translation is clear while taking into consideration a balanced font size and colour but still, the localization includes foreign elements. The only thing that was left as it is by the localization team was the control panel icons which are universally used by all gamers of different identities. The localization team also made sure to colour the button icons the same as they are in the gaming console controllers and made changes whenever they are needed. The following pictures are examples, see appendix (A).

Another text type of in-game asset is called the narrative text. The narrative text functions as an expressive/informative one. In other words, it is a type of text with the purpose of informing/expressing as its name says. Its function is to bring that certain information in order to create a backstory of the game. The narrative text usually comes as a prologue which is introduced before the start of the gameplay. The main feature which differentiates these narrative texts from other ones is that it refers only to the properties of the gameplay world story and it does not necessarily recognize that this gameplay world story is a part of the video game itself. That is, the player character is the one directly addressed, and not the players themselves. The following is an example taken from Dying Light 2: Stay Human (2022) contained in the narrated story of a mission, see appendix (A).

The example above is one of a narrative text. The storyline is set in Harran, a fictional city located in the Middle Eastern region. Mumbai and Istanbul were the major inspiration for the video game. As we can see, the text is often characterized by a formal style of texts. The writing style has a natural flow and a distinct rephrasing of words to add more information and make the style as understandable as possible. The translation usually needs fluency in TL priorities following both register and style conditions.

It is sometimes necessary to fully understand the back story for a successful interaction in return in terms of the gameplay. The example narrates the backstory of a location related to the mission where an “Alder Wood Windmill” was built. The windmill is not literally built from Alder wood but was built using old furniture and scrapes. Due to the fact that the windmill was built in the middle of an Alder tree field, it was named after it, see appendix (A).

Through the translation of this part, the localizers were clearly struggling between SL specifics and TL generalization. “Alder” trees are a type which belongs to the birch family. The localizers faced a huge challenge here in translating the word “Alder”. Instead of looking for the specific noun for “Alder” in Arabic, localizers did not put any effort and decided to just give the general term for the family the tree belongs to. The localizers decided to choose the term "البتولا" which is the equivalent meaning of the word “Birch”. This is due to the fact the localizers are low on dictionaries related to flora and want to just include the major known term. “Alder” can be replaced by its Arabic counterpart "نغت او جار الماء" (Kachaf Encyclopedia, 2020) which has the same meaning as these flora species.

Another example of in-game assets is the unvoiced interactions. These texts function as informative and include instructional commands. They mainly aim at providing instructions and trigger a specific action done by gamers. These interactions usually appear in written form and are commonly used for NPCs. It takes the literary passages used to merge the player into the game experience or as an accomplishment of finishing a certain level within the game. Those conversations usually take place with minor characters (Non-Playable Characters –NPC) that are controlled by the game system, not the player themselves. Here is an example taken from Ghostwire: Tokyo – Prelude (2022), see appendix (A).

As seen in the previous example, all these elements make the gameplay screen extremely full in comparison to typical software screens. Dialogue spaces are more restricted to give gamers the best game experience they would ask for. That can be avoided by not using any abbreviations whenever possible and using clear language. The text is characterized by speech expressions employed in written texts with a statement style. The NPC stated, “The main character should be aware” of a nearby event and stay safe after “receiving an alert”. The necessity to keep a natural flow of words in the same manner as the original is of great importance here. In translation, the conversational style is kept to reflect a fluency in TL generally with an ordinary form of register.

The text follows a cautious and authoritative tone (warning) ruled by the manner the NPC “Rinko” speaks. A similar register tone is decided by the use of specific expressions to convey the meaning held by the tone. For example, the NPCs sent a warning to his teammate considering the situation in the location he was in. He said, “Hold off on pursuing until we’re able to send support” in comparison to its Arabic counterpart "أجل الملاحقة حتى نرسل الدعم". As these examples demonstrate, the tone the register follows has an effect on the listener. That is, both the ST and TT should follow the same tone in order to deliver the meaning intended by it and that can be noticed in the given example. In a more explanatory manner, the TL expression should follow a “cautionary state” that needs to be rendered the same way as the SL expression as close as possible to the original one.

One final example is the system terminology text. This text functions as an informative text for useful pragmatic means. The system terminology includes messages generated by the system, such as platform-specific terminology, warning notifications, and instructions.

Dietz (Dietz, 2006) argues that a game interface should not suspend the gamer’s will of faith in terms of a video game’s ‘reality’. The video game interface differs from the one of a normal application that is built into the programs, by existing as a semi-transparent layer between both the space of the game and the space of the gamer. In other words, it must keep a low profile and be fully functional in order to work the correct way.

The terminology employed by different platforms, such as Sony’s PlayStation and Microsoft’s Xbox varies greatly. However, localizers need to have a common knowledge

of it and adjust their translations according to the terminology used in platforms that will embrace the release of the game process. The following table contains examples of the terms authorized for the PlayStation and Xbox consoles by their manufacturing companies in English and Arabic:

Table (1)

Comparison between PlayStatin's Terminology with Its Xbox Counterpart

PlayStation's English Terminology	PlayStation's Arabic Terminology	Xbox's English Terminology	Xbox's Arabic Terminology
Analog Stick	عصا التحكم	Thumbstick	عصا الابهام
Memory Card	بطاقة الذاكرة	Memory Unit	وحدة الذاكرة
R1 Button	الزر الأيمن الأول	RB Button	الزر الأيمن العلوي

The previous examples include some frequently used terms. For example, Sony refers to the top right button on the back of a controller as the "R1 Button" which usually allows the player to perform multiple actions based on the game type as well as move between sections on the game interface. When localized in Arabic, this button function is referred to as "الزر الأيمن الأول". On the other hand, Microsoft uses the term "RB Button" which has the same function as the previously mentioned button, and it is referred to as "الزر الأيمن العلوي" when localized into Arabic. That is, each platform has its own unique terminology. In case the wrong terminology is used, a video game could fail the submission process to the gaming platform owners. Furthermore, using the term "Memory Unit" in a game that is going to be released for Sony's PlayStation would lead the game to be turned down, and it would have to revert back to the video game developer to make the necessary changes and resubmit it.

3.6.2 Textual Graphics and Displayed Texts

The art assets relate to the different graphics and images input within video games. They include textual graphics such as maps, signs, notices, warnings, writing on walls (graffiti), posters, billboards, and maps. These graphics efficiently play a role in how the video game world is characterized. In some cases, it may not need a translation, and it may appear in a different language from the SL. For example, many games which are originally in English show features from other languages such as drawings, and murals on buildings and walls which should be maintained as it is to create a distinctive

atmosphere. The following is an example taken from Battlefield 3 (2011), see appendix (A).

Besides, texts in the art assets (as in the previous example) can neither be derived for translation use, nor can it be easy to reintegrate. Developers need to reprogram them in order to achieve a localized text. All in all, textual graphics may be left by localizers as it is in the original language in order to save plenty of time and effort. O'Hagan and Mangiron (O'Hagan & Mangiron, 2006) states that some texts in the SL are left as they are in the localized version to present a heterogeneous textual space.

Commenting on this issue, the text will only wind up disturbing the players who are not acquainted with the SL which ends up in them breaking their integration into the video game experience. In addition, textual graphics may feature information that is related to the gameplay atmosphere. This means that gamers who do not have enough knowledge of the ST are potentially going to miss out on the information. The video game, like many others, has a mix of both Arabic and English languages which are considered unmatched due to the fact that the game is foreign but the events are in an Arab country that includes an eastern tone.

The space here was set according to the Arabic space constraints. While Arabic depends on full meaningful sentences, English sometimes relies on the use of abbreviations. The Arabic used the sentence "صالون الإخلاص للرجال" while taking into consideration giving enough space to write within. In contrast, the English translation of the sentence "Honesty Gents Salon" is abbreviated as "Gents". This is a reference to "Gentlemen's". This was due to the limited space the text layout had.

Another character used in the English text is the use of high-class terms. The term "Gents" gives the reader a feeling of royalty where the reader feels like he/she has a significance in the community they live in. In contrast, in Arabic, the developers choose to refer to men by only mentioning the gender they belong to in the language which is "رجال" known as "grown up men" in English without pointing out any royalty attributes.

In conclusion, this could have a negative impact on gameplay performance. To solve this matter, it is recommended that textual graphics and programs be translated so that they can be extracted and modified easily.

3.6.3 Audio and Cinematic Assets

Audio assets include all the elements with audio/voiceover which require translation. Audio assets usually come in the form of a song, script, or recording. In contrast, cinematic assets consist of video cut-scenes. It is the only element that cannot be interacted with. Gamers cannot control the cut-scenes sequence since they are required to watch it. Some advanced games include the option of skipping these cut-scenes according to their relevance to the story of the game.

In-game cinematic clips change players into viewers for a short duration of time. Gamers have the option of skipping the video game cinematics, and that's why the translation of these cut-scenes has been overlooked. Overall, many gamers do not keenly show interest in the sequence and give attention to quality of its translation.

Nevertheless, many techniques have been used in game production the same as the ones used in the making of movies lately. This pattern is referred to as 'cinematic video games' which will probably have an impact on video game localization due to the fact that it consists of a playable movie with different choice selections.

One of the main techniques used by localizers is the lip-synch voiceover. This translated text functions as an informative/expressive text. It provides a hint or a narrated story in a dramatized pattern. The following is an example of the lip-synching voice-over technique taken from Detroit: Become Human (2018), see appendix (A).

In a conversation between the main character and a minor one, lip-synching has been perfectly matched. The translation is synced with the translated lines. These translated lines are usually done by voiceover experts in order to build characters in the video game with the same features of voice and appearance as if they were originally in the TL (Arabic) native language. The audio-visual spoken lines have to be compatible with the linked subtitles. The text is oral and is introduced with specific character features and the writing style is characterized by a natural flow. In some cases, dubbing experts and moderators may come up with changes to the translated scriptwriting. For example, in the original English version of Detroit: Become Human (2018), the woman in the previous gameplay video "Mrs. Caroline Philips" asked, "Why aren't you sending a real person?". For someone who barely started playing the video game, they wouldn't understand the reason why she said "a real person". This word can be translated literary as "شخص حقيقي"

contrary to the actual localization which contained "انسان بجد". The localized version gives the real purpose behind what she said. The truth is that the character isn't a real human but an "android" aka "a robot".

In translating audio-visual assets, preference should be given to the lip-synch movement. Nowadays, the TL (Arabic) is either fluent or everyday spoken dialect. In this example, the video game included the everyday used Egyptian dialect. It is also characterized by the use of linguistic variations, and it may lead to rephrasing as seen previously.

3.6.4 Printed and Hard-Copy Materials

Printed materials (hard copies) include all those items that are printed with ink that gaming companies include with games. Examples of these printed materials are instruction manuals, game history, gameplay controls, and package covers. Hardcopies are not necessarily translated by the same translator or localizer who has worked on localizing the video game. The game may also include advertisements, legal documentation, promotional articles, videogame coverage, and gameplay guides.

Printed materials are also the sole asset for which there is a high quality of flexibility. There are approximately no applied space restrictions. In some cases, video game publishers organize all localized printed materials bearing in mind the same outline as the original. However, it may occur that localizers are rather allowed to reorganize the structure of the page set with respect to the TL norms according to the text type and market demands.

However, a sudden change occurred in the market. ShackNews, a site interested in video gaming news, published a news article on April 19, 2010. The famous gaming company Ubisoft considered eliminating printed manuals to replace them with a digital copy within the video game itself due to the high costs of paper production and environmental effects that it would leave. This shift would have an effect on the classification of manuals as they are no longer part of printed materials, and they would be more felt like in-game texts (Faylor, 2010).

Printed materials, such as user manuals, usually function as informative texts. A manual hard copy includes data and guidelines on how the game functions. Printed materials usually have various text types. The text types vary between informative, technical, and

promotional. Moreover, printed material may be translated by more than one localizer with different points of view. Here, the localizers need to be coherent in the translation of terminology with respect to the in-game text materials.

3.7 Video Game Localization Process

This section describes in detail the main stages of the video game localization process according to O'Hagan and Mangiron (O'Hagan & Mangiron, 2013). The process goes as follows: Pre-localization, Localization (Translation Process), and Post-localization.

3.7.1 Pre-Localization Process

Pre-localization is the preliminary process before the localization process starts. It seeks to make sure that the video game pattern will be executed with ease and with no real problems. This process goes through many preparations. In the beginning, the localization devices contain information related to the video game, in addition to the files and their assets to be localized. They are usually produced by the video game developer or the publishing house.

Freelance translators here play an important role. They are usually appointed by the localizer-in-charge. They are responsible for coordinating and supervising the localization process regardless of whether it was done by a localization agent or a localization professional. The translator later works on preparing the localization process. The translator spends some quality time identifying and familiarizing him/herself with the video game environment. This can be done by playing the video game, surveying information about the structure and the plot of the story, previewing gameplays and walkthroughs, and selecting and specifying key terms.

3.7.2 Localization Process (Translation, Editing, and Voice Recording)

This stage is the center of the localization process. The tricky element of translating video games is that it calls for the same knowledge and storytelling skills that exist in literary works and screenplay innovation. According to Bernal-Merino (Bernal-Merino M. , 2011), the quantity, quality, and heterogeneity of the translatable assets, resulting from video games, may be surprising to individuals who are used to literary and audio-visual translation and other fields that are related to it. Here, plenty of video games would call for the translation of tens of thousands of words that are input into video games.

The volume of work increases significantly based on the number of languages into which a video game would be translated/localized as well as the challenges over many translation models. For example, the sim-ship model is often conducted simultaneously for all TLs while the original video game is still, already, under development. Thereby, the translator deals with a ST which is constantly changing.

In contrast, the post-gold model, as mentioned before, helps the translator to publish the original game with complete items and a static text. In the case of English games localized using this model, they are commonly translated into Arabic for the Middle Eastern Arab market, and then into other languages such as Russian adapting the English language: the US (United States of America) or the UK (United Kingdom of Britain) English as a SL.

After the first step is completed, the video game editing stage follows. The Editing stage includes a review of the translated text and its assets. For example, if the translation were performed based on the in-house model, the translators would reexamine the translated work for one another. Following this, the developers tend to assign this step to editors to run out a review in order to make sure that there are no translation problems and errors and that both the text and its translation are cohesive and homogenous.

Moreover, editing in the outsourcing model is assigned to the translation/localization agency. Editors may make the necessary changes to unite the terminological style in the video game in order to ensure that the product has high quality with the recommended adjustment to the localizers, who will then make changes to the text.

Later, the video game developers move on to the recording stage. Video game producers aim for realism. It can be achieved through the use of the voiceover technique which is an assignment that can only be achieved through a partnership between the translators/localizers and voice-over actors and experts. In this stage, translators/localizers should not expect the voiceover chains to be displayed in a linear fashion. In other words, all the fonts for each playable or non-playable character may be put together in a group instead of being displayed in their interactions.

While the translation process is underway, voice-over specialists begin working on the translated text that needs to be recorded. As predicted, time differences grow when

adopting the post-gold model. In contrast, adopting the sim-ship model makes the recording and the translation process go head-to-head with each other simultaneously.

In addition, voice-over performers are not usually informed about what happens in the video game and are only able to match their performance with the original recorded voice of the SL. As soon as the textual materials have been recorded, video game developers are not willing to make any changes to it. That is due to the high costs of editing voice records. The only possibility that it would be changed is that a major error is discovered. Still, in case of incompatibility between a translation and a voiceover, it is more possible that changes would be implemented to the localized records but with some financial charges. That is, the problematic lines may be highly vulnerable to be re-recorded.

3.7.3 Post-Localization Process

Post-Localization is the final stage that comes in the localization process after the Pre-Localization, and Localization (translation, editing, reviewing, and recording) of video game textual files. According to O'Hagan and Mangiron (O'Hagan & Mangiron, 2013), this stage goes through the integration of the target versions (First Playable Alpha/ Beta Version) followed by quality assurance and debugging (error correction). In case of localization approval, a submission of the released candidate version is sent to the first parties to end up with production and distribution. If the localization process were not approved, the process would restart from the beginning.

In the integration (First Playable Alpha) of the target version phase, a team of professionals work to achieve complementarity between the translated text, audio records, and artistic assets in the video game software to create an initial version that can function the same way as the localized product. The integration procedure is repeated a number of times. For example, developers proceed with writing and programming while the localizers are work on the text translation and the voice-over actors audio record them.

The process goes as follows: Every time a new text is produced, the conversion between the ST and the TT is pursued, and it winds up with the text integration into the language textual database that contains the video game textual material and software. This process goes in the climax to update more and more new sets of localized texts, and it is referred to as 'the text drop' process.

The second phase goes through quality assurance and debugging. As soon as the first playable alpha version has been completed, a group of gamers plays the beta version to test it. They start by investigating everything in and out of video games. They start rummaging through it to identify any translational errors or bugs and start listing them all in an information base specialized for such purposes. Every time a bug is discovered, newer versions with updates are reintegrated and later would be released. This process continues until they come up with a stable definitive version of the video game.

In this field, one of the main challenges and errors that faces the localization of video games is linguistic challenges and errors. Linguistic errors are mainly concerned with bugs and malfunctions related to translated texts. Those challenges and errors are detailed in the next section.

3.8 Linguistic Challenges

As mentioned above, linguistic challenges are generally concerned with problems that occur in the translated texts. These challenges usually include many aspects like transference, block letters (Disconnected Units of Characters), translating variables, wrong choices of translation, and lexical problems. The researcher tends to take them one by one in detail:

3.8.1 Transferring Term Meanings/ Transference Errors

According to Newmark (Newmark, 1981), transference is the process of transferring an SL word to the TL text as a translation procedure. He states that transference includes the process of transliteration, which is concerned with the process of converting different alphabets between two languages such as Arabic-English or English-Arabic. The definition is similar to what Harvey called “transcription”. In this field, the word is referred to as a “loaned word”.

In other words, some deny the fact that transliteration is considered a procedure of translation. However, it is regarded that no other term can be implemented to use if the gamers decide to choose an SL term for their text. For example, the word “camping” is a word used by gamers to refer to the process where a player sits in one place, especially in shooting games such as Call of Duty, PUBG, and the like of it instead of continually roaming around the game map. People who do this activity are referred to as ‘campers’.

However, this term in the TL (Arabic) is referred to as "كمبرة"and a person who does this act is called "مكمبر". Even though the word "campers" has an equivalent in the TT which is "متعسكر او متمركز", the Arab localizers deal with the term as a foreign one by applying the process of transference. Transliteration here is justified due to the fact that Arab gamers identify the term "مكمبر" more than its equivalent while playing such video games. These usually focus on transferring linguistic terms and the like of it including the content of language. The term belongs to the USA military genre but it was transferred to the Arabic language due to the conflict between the two cultures which leads to a transition between both SL and TL thus making the Arab audience feel more comfortable dealing with it. Instead of finding an equivalent and transferring the meaning, the localizer decides to transfer the term sound the same way as it is in English.

Table (2)

Suggested Translation for the Term "Camping" in Arabic

ST (English)	TT (Arabic)	TT (Suggested Arabic)
Camping	كمبرة	تمركز

In some cases, words can be considered as 'undefinable'. That is, their meanings might not exist in the TL as they are in the SL. To know the origins of a word, the gamer should engage with the gaming community to gain a resourceful common sense of what it means. He/she needs to make the term clear by going back to the meaning it reflects within the SL. Such terms can be seen with a meaning on sites such as Discord. For example, the term "Bots" refers to non-human opponents (robots) in multiplayer games that are controlled by artificial intelligence. It is also commonly used as an insult when calling another player "a bot". A gamer would say that to someone who also plays in an extremely poor manner. Such a term as "bot" doesn't have any equivalent meaning but itself which leads to transferring/ transliterating it. Arab gamers use the term "بوت"to refer to it. The TL community until now does not have an equivalent to such a term although meanings are clear and visible to gamers. The following is a suggested near translation for the term:

Table (3)

Suggested Translation for the Term "Bot" in Arabic

ST (English)	TT (Arabic)	TT (Suggested Arabic Translation)
Bot	بوت	لاعب افتراضي

Here, the sentence "لاعب افتراضي"holds the same meaning as “Bot”. A “Bot” is short for the word “Robot” which is a software program that carries out automated, repetitive, predefined tasks. "لاعب افتراضي"is a virtual player programmed by the video game company to fill the empty numbers of players the server of the game has. Sometimes the match starts with a number of missing players, so the server is forced to automatically install those spaces with bots to complete the number in a single game.

3.8.2 Disconnected Units of Characters/ Block Letters

The Arabic language is marked by conjoined alphabet letters. That is, the letters are linked together to make a meaningful word characterized by a cursive stereotype. Arabic cursive font makes the letters flow together in a synchronized manner. The majority of letters are joined together in a functional manner to be used in everyday writing.

In order to add a conjoined string of Arabic words, special video game software should be included to improve the quality of the Arabic language experience. This would guarantee that the included strings are written from right to left. However, the problem is that many video game user interfaces do not support foreign language writing styles other than the Latin alphabet. The following is an example from Batman: The Enemy Within (2017), see appendix (A).

As seen in the previous example, many games have problems with the videogames user interface. They usually include Arabic written sentences in a weird or separated or reversed manner, thus making gamers wonder what the reason behind it is although most newly made video games are equipped with modern coding. The reason for the problem is a sudden change to the default game system font from the original font to another one that is not supported by the new version of the video game system itself. This necessitates a call for a new version of the video game with a supportive font and complete new updates.

The text is tricky and hard to read due to the way it is written. The sentences read as "باتمان: يمكن بدء حلقة "العدو بالداخل" كقصة جديدة تماماً أو تكملة لخيارات الموسم الأول التي اتخذتها" and "استخدم الخيارات الافتراضية". This problem only exists in the user interface opposite of the gameplay subtitles which are written correctly. Look at the following example from the same game, see appendix (A).

As seen in the previous image, the difference is clear. Most video game interfaces are not equipped with the right settings as in the yellow circle. In contrast, the in-game command and subtitles have no issues and they work smoothly the same way as in the red circle. The sentence in the yellow circle should read as "لديك مقدار محدود من الوقت لاتخاذ خيار". Most video game studios do not tend to fix this problem because it costs too much money which surpasses the video game budget and needs a lot of effort to be fixed. The reason is attributed to the difficulty of editing it when it is already out on the market as well.

This may also affect the sales of video games in the target Arab areas due to dissatisfaction with the unexpected video game results. Arab gamers have a hard time reading. All these problems can be solved from the start by allocating more money to fix all the faults as well as giving more attention to the UI translation coding which plays a great role in helping the video game market to expand in the Arab-speaking areas without suffering from any losses on financial level or on the fan base level.

3.8.3 Variables in Translation

Video game terminology includes variables. All video game software contains strings of sentences with replaceable variables. For a localizer, this can impose a challenge. Why would a variable create a challenge? It would be because the translated sentences have to make more sense grammatically regardless of what text is added later when the linguistic variables are replaced.

A linguistic variable is a letter that differs in its pronunciation between different communities. In this situation, a variable can be defined as code that is substituted during the video game as a text with value or term according to the selections made by the gamer and the development of the video game plot. One example is the plural “s” in English and Arabic for gender and the numbers from Fortnite (2017):

Table (4)

A Comparison in Fortnite’s Use of Variables between English and Arabic

ST (English)	TT (Arabic)
You won a gift box	لقد ربحت صندوق هدية واحد
You won two gift boxes	لقد ربحت صندوقي هدايا
You won twenty gift boxes	لقد ربحت 20 صندوق هدايا

As Table 4 shows, the variables of numbers in the ST would be substituted by the actual number of boxes. Also, the singular/plural variable would either be replaced by the singular "Ø" or the plural "s" depending on the number of boxes. As we can see in the table, such variables work in the ST while in TT, in case of translation into Arabic, this set of variables would not function. Therefore, to solve such a problem, the variation needs to be multiplied as shown in the previous table. The translator would be left in such situations to make assumptions about the gender and number of participants. If the translator does not know enough about the TL it will cause a great difficulty.

If the variables were to be translated into Arabic, the previous set of variables would not work. In this field, gender and numbers can both pose a challenge. It can be obvious specifically while translating English into Arabic.

Table (5)

Comparison between Fortnite's Use of Gender and Number Variables between English and Arabic

ST (English)	TT (Arabic)
You won the match	لقد ربحت/ربحتما/ربحتم المباراة

In this example, many players would receive the following message after finishing a match, especially in a Deathmatch mode, "You won the match". If in any case the same ST was translated and localized into Arabic, this sentence would have not one but many different translations according to the number of players: a solo (singular), duo (duality), or a squad (plural). In this situation comes the role of the video game developer to input the three different variables (ت/تما/تم)rather than one as in the SL in order to make sure that the final product is accurate and functional.

3.8.4 Wrong Translation Choices

Wrong translation choices usually occur when the text is inaccurate and misleading and does not match the original ST and is full of grammar and spelling mistakes. The wrong choice of grammar may hinder the pace of the game by drawing the gamer's attention to the wrong place. At the same time, several video game development studios work to avoid grammar mistakes but still many video games are full of mistakes. The following is an example from Naruto Shippuden: Ultimate Ninja Storm 4 (2016), see appendix (A).

The above example shows a weak translation as well as a wrong choice of words. The translation made by the localizer is too literal and hard to understand. The language is stiff, making it hard for even Arab gamers to understand the meaning and function of these words. As can be seen in the example, each sentence is translated as follows:

Table (6)

Naruto Shippuden: Ultimate Ninja Storm 4 English and Arabic Counterparts

ST (English)	TT (Arabic)
Secret Technique	المهارة القصوى
Awakening	الصحوة
Max Health	الصحة القصوى
Linked Secret Technique	أسلوب سري مرتبط
Combination Secret Technique	أسلوب المجموعة السري
Unleash a Linked Special Move with Your Entire Team!	اطلق حركة متصلة خاصة مع فريقك بالكامل!
Linked Awakening	صحوة مرتبطة
Awaken Your Entire Team!	صحوة فريقك بالكامل!
Previous	السابق
Chakra	تشاكرا

In the example above, the translator chooses to take literal translation in an amateur way. The "literal" translator breaks down the ST into single elements and replaces each element with a similar one in the TL. The samples above are full of mistranslations caused by the literal use of words. A mistranslation happens due to the SL's complex syntax, resulting in incomprehensibility on the part of the TL. The video game was apparently translated by a non-expert (One who was unfamiliar with the original story of the video game). The inadequate knowledge of TL and grammar is noticeable. The video game story belongs to the anime genre (A specific style of cartoon, mainly for adults, produced or inspired by Japanese culture and animation). Therefore, anyone who isn't familiar with the original anime would not be able to understand the text function. The researcher suggests the following translations that are related to the actual anime adaptation.

Table (7)

Suggested Translations for Naruto Shippuden: Ultimate Ninja Storm 4 English and Arabic Terms

ST (English)	TT (Suggested Arabic Translation)
Secret Technique	المهارة الخاصة
Awakening	استثارة القوة
Max Health	بصحة ممتازة
Linked Secret Technique	المهارة الخاصة المرتبطة بالفرد/الفريق
Combination Secret Technique	تشكيلة المهارة الخاصة بالفريق
Unleash a Linked Special Move with Your Entire Team!	اطلق العنان للمهارة الخاصة المرتبطة باستخدام فريقك بأكمله!
Linked Awakening	استثارة القوة المرتبطة بالفريق
Awaken Your Entire Team!	ايقظ قدرات فريقك بالكامل!
Previous	رجوع الى القائمة السابقة
Chakra	مستوى النشاط الحيوي

3.8.5 Lexical Problems

According to lexical patterns, a word is "a bundle" of meaningful components. The translator needs to be able to analyze the lexical items (words) of the ST in order to be able to translate them. This means being able to "unpack words" to show the meanings that are represented by the lexical form.

One of the main problems encountered by the localizers of video games is the difficulty of rendering some lexical items. Collocation words are a case in point. Collocations refer to a phenomenon in the language under which a lexical item tends to stay correlated together with other words. It is a lexical relation of occurrence that links words together with different degrees of strength. In other words, translating words from one language into another may face difficulty due to a word having multiple meanings, known as collocational patterns. The following example, taken from Naruto Shippuden (2016), illustrates this point:

Table (8)

Naruto Shippuden: Ultimate Ninja Storm 4 English and Arabic Counterparts

ST (English)	TT (Arabic)
Awaken Your Entire Team!	صحوة فريقك بالكامل!

Clearly, The ST word “Awaken” has more than one collocation. The meaning has been introduced formally and literally, making the word unnatural or vague when using (صحوة). In this case, using literal translation is probably the worst decision because it overlooks the context of the word in which it was used for. A better translation can be offered by using a synonym or a near-synonym:

Table (9)

Suggested Naruto Shippuden: Ultimate Ninja Storm 4 English and Arabic Translation

ST (English)	TT (Suggested Arabic Translation 1)
Awaken Your Entire Team!	ايقظ فريقك بالكامل!

Here, we can see that the suggested translation of the word “Awaken” is more acceptable than the translation of the localizer in the game. The word "ايقظ"has a more understandable function and meaning than the word "صحوة". To make it more functional, a term can be added to the sentence in order to give more sense to it. An “Awakening” in the anime is an ability where the character unleashes its strength to the maximum level. Though the localizer did not mention the word “ability”, still a gamer who has enough information from the anime would understand that both “awakening” and “ability” are collocations. Therefore, adding the word "قدرات"to the translated text would make it sound more functional and logical. The following is a clarification of how the sentence is translated:

Table (10)

Naruto Shippuden: Ultimate Ninja Storm 4 Suggested Translation

ST (English)	TT (Suggested Arabic Translation 2)
Awaken Your Entire Team!	ايقظ قدرات فريقك بالكامل!

Another lexical problem is transliteration. Transliteration involves the naturalization of a term or a proper name at the phonetic level. The SL spelling and pronunciation are both transferred into a given language. In other words, some terms are directly transliterated with the same sound and writing through replacing the English alphabets with the Arabic ones in spite of the differences between the two languages. Both languages are known to be far apart linguistically. The following translation of the word “Chakra” from Naruto Shippuden (2016), is a case in point, see appendix (B).

This is a perfect example of transliteration. In this case, all the localizer did was replace the letters from the SL with the same phonetic letters in the TL instead of providing a sufficient translation. This is due to the lack of a unified method for translating similar terms into Arabic, thus making the transliteration unstable and changeable between more than one translation in case of its translation by more than one person. For example, see appendix (B).

As seen above, the translation reveals inconsistency because transliterations are shown more as foreign elements. Foreignization is the process of keeping some of the foreignness of the original. While “Chakra” should be translated to "مستوى النشاط الحيوي" as it is dealt with in Arabic, the translator was content with translating it as "تشاكرا". It is obvious that there was no standard method for transliteration of foreign terms considering that the word “Chakra” has Indian origins. The following is a suggested translation to clarify what is meant by the term “Chakra”, see appendix (B).

3.9 Linguistic Errors in Translation

According to Baker (Baker, 1992), translation errors mostly happen due to the non-equivalence between the SL and TL. Translation errors are usually related to each other. In order to solve one error, a solution for another must be explored. Linguistic errors can be put into a number of categories:

3.9.1 Linguistic Accuracy

Mansouri (Mansouri, 2007) argued that translators tend to use bilingual dictionaries as they strive for translational equivalents mainly during the process of translating texts from English into Arabic or vice versa. However, this practice is far from satisfactory. In the case of English-Arabic, most existing bilingual dictionaries are rather useless in dealing with these semantic fields.

The field of gaming suffers from this due to the lack of dictionaries that are specialized in gaming terminology. Therefore, they only depend on regular dictionary which causes inaccurate translation. The lack of accuracy often confuses foreign gamers especially in the case of Arabic when they read specific terms. They usually do not understand what precisely the translator means by what they translated within the game due to the

differences in accuracy. In this case, a considerable number of distinctive semantic attributes of this field are disregarded, thus leading to the loss of accuracy.

In the gaming community, numerous games have many inaccuracies due to the wrong choice of words by the game localizers. Therefore, when many terms are being read in the TL, they do not achieve the same equivalent meaning as they do in the SL. The following is a sample taken from Call of Duty: Mobile. The sample shows differences between both the SL and its TL within the game settings translation, see appendix (A).

In the previous example, the translator may have inaccurately rendered a few elements. The reason for that might be due to the interference of the translator's mother language. In an English-speaking community, the translators are more attached to their first language, they intend to translate according to their comprehension. They adhere straight to the dictionary meaning and the TL grammar but that would lead to the use of a meaning related to them. The following is a list of model translations that would be more accurate and acceptable, see appendix (B).

In this example, each of the aforementioned terms is given one or more than one translation according to different dictionaries. The terms "Graphic", "Anti-Aliasing", and "BR Settings" hold the meaning of "الرسوميات", "تنعيم الحواف", and "اعدادات الباتل رويال" as given by the localizers of the video game. What the localizers missed here was the accuracy. The localizers need to be as accurate as possible when they translate from one language into another in order to deliver the meanings of the original text as they should be. Translating terms as "near-translations" of meaning can be unsatisfactory. Here, they put all their efforts here at a loss because of their dependence on dictionary meanings.

This problem can be solved by giving more accurate and precise translations of technical terms. The localizer needs to capture the full meaning of the lexical terms in this field and translate them as accurately as possible according to the context they relate to within the original text. A more lexical meaning for the term "Graphic Quality" than "جودة الرسوميات" is "الجودة التصويرية". Here, words such as "الرسوميات" are more related to cartoons and animated films because those depend more on "drawn" pictures and graphics, on one hand, and are later input into special programs for animation. On the other hand, the term "التصويرية" is concerned with audio-visuals in the field of gaming. Video games are completely made on computer programs contrary to the term mentioned before. It

depends on moving drawn pictures by a computer on a strong video game design software engine like Unreal Engine (1998).

3.9.2 Translating Culture-Specific Expressions

As aforementioned in Chapter one, the localization process includes taking a certain product and making it, both on the linguistic and cultural levels, appropriate to the target locale (country/region, traditions, religion, culture, and everyday language) where it will be used and sold (Fry, 2003). A localizer needs to introduce new cultural references, jokes, or any other expressions, necessary to maintain the gaming experience, and to produce a fresh and engaging translation.

Videogame localization includes some aspects of media and audio-visuals which extend beyond a text. In order to meet the target gaming audience's cultural expectations, it requires careful analysis and adaptation. If it fails to do so, it may result in a negative outcome. In localization, both the ST and TT have encountered troubles while translating culture-specific expressions. The following example taken from Uncharted 3: Drake's Deception (2011) illustrates this point, see appendix (A).

In the aforementioned example, the minor antagonist character "Ramses" is an Arab mercenary from Yemen who works as the leader of a group of pirates in the Indian Ocean and has been hired by the main antagonist Katherine Marlowe (Uncharted Wiki, 2016). In the English-Language original copy of the video game, Ramses uses an Arabic language expression saying "يا صباح الفلافل والحمص والبابا غنوج". This is an Arabic expression that is used by villagers to say "Good Morning" in a folk manner. Arabs consider such a catchphrase a blessing and a good wish.

In such dialogues, characters may express colloquial expressions. The problem lies in the unavailability of cultural expressions that are rendered into the English language as functional equivalents. This may result in an ironic incomprehensible expression. There is no cultural equivalent or anything related where the ST from one language is transferred to another. The problem arises when we cannot translate the previous sentence, in the same way, it was used in Arabic. The translation "A good morning of falafel, hummus, and baba ghanoush" would still give the English readers a feeling of alienness and it would leave them lost. Falafel, hummus, and baba ghanoush are all considered Arab

culinary heritage dishes, and it would leave players somewhat confused as to what the relationship between the text and the context is that it has been said in.

Equivalents for these phrases can be found in English, but they usually seem to be odd. Cultural expressions usually need a communicative approach to translation where more creativity is employed to remove any extra unnecessary meanings. A possible translation for the expression mentioned before would be the following, see appendix (B).

The foods “falafel, hummus, and baba ghanoush” are considered Arabic morning dishes. They can be replaced by using a communicative translation from the opposite language of a morning dish in the subtitles. “Wakey, Wakey, Eggs and Bakey” is a popular phrase among American speakers of English. It is used when waking someone up by calling them for breakfast. It can be suggested as a translation rather than just writing “speaking Arabic” in the subtitles encountered within many video games. “Eggs and Bakey” refer to the famous American morning breakfast dish “Eggs and Bacon”. On the other hand, we can compare the original scene with the suggested translation by picturing Nathan (the protagonist) as the breakfast meal for Ramses (minor antagonist) and Ramses consideres Nathan as a “blessing” when he mentions the Arab culinary dishes. In other words, it means catching him alive to get the necessary information out of him. Replacing an ST expression for an appropriate communicative cultural equivalent is more preferable, in this case, than a literal translation of the whole phrase.

If not translated in that way, it would be more appropriate to clarify what it means in a footnote in the screen corner of what the phrase means by saying “falafel, hummus, and baba ghanoush” are Arab famous culinary traditional dishes from the Levant and Mesopotamia regions and they are used here to say, “Wake up; its breakfast time”.

Furthermore, in the case of culture-specific terms, the equivalence can be either formal or dynamic. However, in the case of many religion-specific terms, it can be troublesome. The following is an example from God of War: Ragnarok (2022), see appendix (A).

According to *Encyclopaedia Britannica* (Britannica, 1999), the “God of War” comes from the Greek religion. Ares, the son of Zeus, is the God of War. The difference here is that “Kratos”, the main character in the video game, has won the “God of War” title by defeating Ares in an epic battle according to the video game backstory.

The localizers choose the translation "إله الحرب"to the “God of War” may cause great offence to other players in the world and Muslim Arab gamers in particular. In the previous example, the term “God of War” is culturally and ethnically rejected. According to the Islam, the belief is that there is no God except Allah. The lexeme "إله"is one of Allah’s cognitive synonyms.

However, it is claimed that it is not restricted only to Islam because it is the name of God "إله". The term is used in many ideologies. In the Old Testament, the Bible and Quran, the term "إله" is used in many contexts. Therefore, it makes sense to translate the word “God” into "إله" as a reasonable equivalent to the context. The difference between foreign languages and Arabic is that God in English can apply to other divinities such as old Egyptians and Greek but the Arabic word applies to one and only God “Allah” the same origin as it comes from the Quran and the rest of the sacred books.

The lexeme "إله"is one of Allah’s pronouns, so addressing it to any other than Him would create a problem for Arab gamers. In the translation of the word “God” from English, linguists have made some changes in order to differentiate its meaning. When we say “The God” with a definite article in the beginning the word "إله", it refers to the one and only Almighty Allah. However, if the same word were used without a definite article “God”, it would surely refer to other divinities and beliefs the same way it came in this sentence referring to the Greek God of War Kratos but still the translation of the term “God” would receive negative reactions from Arab gamers.

In many video games, there is the term “God mode” which includes the hardest difficulty of the gaming experience. In the example above, translators identified the hardest mode in the game as “Give me God of War” and was translated as "أريد إله الحرب". When localizing video games, it is important for both gaming developers and localizers to remember that localization is much more than just a translation act. It is considered a complex procedure that requires a keen understanding of culture in its different categories, and languages. It is how they make an impact on people’s different interactions and perceptions with the gaming technology at it’s very essence of localization.

The solution here is for the localizers to accommodate and recognize the differences between cultures to make sure that the final game product is accepted by the target gaming

audience. A more acceptable translation for the term “God of War” should not include the lexeme "إله"and replace it with a more suitable expression for Arab gamers. The “God of War” title is more related to war and chaos and that is the opposite of what Allah is: He is peaceful and merciful. So, the translation should be away from the name of Allah. The following is a suggested translation for the previous expression, see appendix (B).

The role of the localizer here is to identify what the attributes of the text are and how they should be retained and which of them can be replaced to meet the criteria of the TT. The target audience is Arabs and the majority of them are Muslims. However, one of the main attributes of this mode’s difficulty is its blood-shedding atmosphere and goriness. For Arabs, a translation like "أريد حرباً دموية"would describe what this mode is about. It consists of blood, disgusting ways to kill, and the death of a lot of enemies. It gives a clear idea to Arab readers that this is going to be a hard-core type of gaming, and it does not have to be related to Allah’s name or so.

3.9.3 Errors in Translating Proper Names

Al-Batineh maintained that proper names, including the main and non-playable character assets, are not translated when video games are localized from English into Arabic (Al-Batineh, 2021). In fact, video game localizers tend to use transliteration as a beneficial method for transferring proper names when the SL concept is missing in the target audience’s language. The following is an example from Call of Duty: Modern Warfare 2 (2022), see appendix (A).

In this model, we can see how the character uses more than one proper name. The names are pretty known within their community. For example, “Rodolfo” is a Spanish proper name. All speaking characters’ names are distinguished from the rest of the text by a font color. As noted, the name “Rodolfo” is pointed out in blue font color. In English, proper names are marked with capital letters to distinguish them from the rest of the text. The speaking characters’ names are usually followed by a colon (:) to give a signal to the player that the character is about to speak.

The Arabic language in video games, however, does not have capitalization of letters to differentiate proper names. To distinguish proper names, such as the one aforementioned, they are kept the same way as they are in the ST. The video game localizer chooses to keep “Rodolfo” as it is and it is transliterated into "رودولفو"taking into consideration the

phonetic sound of letters and pronunciation. Furthermore, these words represent concepts which do not exist in Arabic. The dictionary does not provide equivalents to proper names. It is more advisable to transform such names, using phonetic transcription from English into Arabic.

In other words, the translation of proper names is usually done phonetically. Different alphabets sound are compelled in a satisfactory manner. As in the example above, “Rodolfo” may come out as "رودولفو" or "رودالفاو" according to its transcription “Rou’dalfou” which leaves us with more than an extra vowel sound as well as diphthongs which do not exist in the Arabic language. As mentioned before, this process is called transliteration. The foreign name here becomes a loanword in Arabic text. The problem presented here is the omitted vowels and their phonetic effects. The Arabic vowels ا، و، ي a, I, u have short and two long diphthongs (أي، او) (ay, aw) while English has more than fifteen vowels.

Another point, while playing video games, is the use of genre-specific terminology. These specific genre terms are usually shared by both SL and TL. In action shooter games, military terms are usually common and used in a way to represent the video game environment. For example, the military term “Ghost” is coined for the main character Lieutenant Simon “Ghost” Riley.

“Ghost” is a military rank which refers to a special unit of highly skilled soldier experts in enemy units dismantling, tactical offense, and infiltration. They are marked by a concealed identity and appearance as well as camouflage to hide their identity and maintain their mysterious anonymity in the war field. A “Ghost” also holds meaning of fear and terror towards anyone who would hear it (Call of Duty Wiki, 2020).

Here, the localizer needs to have some kind of background information in relation to the video game military genre. In this example, the name “Ghost” is in the same white font colour as the rest of the text. Same as the rest of names of characters, “Ghost”, was transliterated into "غوست". Arab gamers who are not familiar with the background of the term “Ghost” in the military would not know its exact meaning. In addition, when translators transliterate names of characters such as “Ghost”, the transliteration differs from one translator to another.

Despite the fact that in military rankings in any army unit similar terms can be found but the only problem is that it has different meanings. In a more explanatory manner, the term "الجندي الوهمي" or "الجندي الشبح" in the Arab region, in particular, refers to a corrupted act where there is a non-existent large number of soldiers whose salaries are being taken by somebody else. So, the localizer thought that the best decision here was to keep the word transliterated than translate it due to military language differences, but still it may inflict a huge problem for those that are not knowledgeable enough in such a field of language.

3.9.4 Translation Errors in Repetition of Lexical Items

Many linguists consider this type of repetition as a language "redundancy". This type of repetition is more common in Arabic than in English, and it is more used and applied in voiceovers and subtitles. That is, the localizer takes this type of repetition with no choice but to use it due to language differences.

In this context, the conjunctions are an example of lexical item repetition. The use of conjunctions is highly problematic for non-native inexperienced speakers of the English. The difficulty that both English and Arabic language speakers encounter when translating conjunctions derives from the differences between English and its Arabic equivalents.

Conjunctions are items that link and join two words, phrases, clauses, or sentences together in both spoken and written form. Conjunctions are one of the eight parts of speech in English, according to the English language's traditional grammar. Users make many errors when using them and face a number of challenges. Arabic language, in contrast, is known for excessive use of conjunctions in order to hold the text as an integrated whole.

Conjunctions are considered cohesive devices where they connect a text together. This redundancy in some cases inflicts an issue on the translation where in English the conjunction is not repeated. However, it is overly used in Arabic.

In some video game UIs, the translation of text might differ in English and Arabic. While in some translations the ST might not need any existing conjunction, the TT might need some. Otherwise, the translation may seem unclear, and it would be hard to be dealt with, thus causing the redundancy problem. The following is an example from PUBG's official UI (2018), see appendix (A).

The aforementioned example shows a type of redundancy difference. When conjunctions such as “and” are used, they do not show any type of redundancy in English but are compensated by the use of the comma symbol to indicate a number count. When translating a number count, many languages tend to be redundant. The Arabic language is a case in point. In some cases, this redundancy may seem weird semantically. That is, due to the fact that the conjunction “and” when translated into "و" it would be multiplied in number, thus making it redundant.

Redundancy is a bit problematic here. The word “original” is a part of the term referring to the “Battle Royale”, and it works as an authentic adjective. The term “The Original Battle Royale” works as one linguistic unit, and it refers to the fact that “PUBG Mobile is the first game ever to introduce the bases of the Battle Royale mode and The Original Battle Royale is a registered trademark”. In contrast, the adjective “First” and the adverb “Best” are only descriptive information that is related to the term “The Original Battle Royale”. They are only considered complementary characteristics.

The solution here comes through not being bound to the rules of the TL. As seen in the ST, there is a stop sound after the sentence “The Original Battle Royale”. In order to keep the sentence related to the original, the localizers should take that into consideration and be more flexible and free in their translation, especially when it comes to a registered name/trademark, but without making any repetition or redundancy and additive descriptions following them. Therefore, a more acceptable translation in Arabic would be to delete the first conjunction "و"and keep the second one to maintain the text as it is in the original as well as making sure that "لعبة المعركة الملكية الأصلية"is kept intact as it is registered. The following is a modified version of this translation, see appendix (B).

3.9.5 Translation Errors in Word Order

Sado maintained that the English and Arabic languages have different themes of word order. English takes the Subject + Verb + Object pattern. In contrast, Arabic takes the Verb + Subject + Object pattern. Word order has been shown to pose a major challenge in translation (Sado, 2007).

While the English language gives attention to the use of subject as an opening, Arabic gives its concentration to the use of verbs in their different forms in addition to different linguistic tools. Many localizers can see themselves stuck by the word-formation of the

SL. The problem resides in the fact that the TL still does not copy the influence of the SL word order. In this case, the result in the translation would sound inappropriate.

Word order is influenced by the subject. It is a more translation problem in the TT than in ST. The following is an example from the Battlefield 1(2016) video game, see appendix (A).

The "الا انه يوجد انسان خلف كل مهداف يوجد انسان", has a problem in its translation. The localizer could not identify the perfect method to arrange the right grammatical sentence. The hesitancy is clear because the word "يوجد انسان"was repeated more than once in different positions within the same sentence.

As mentioned before, the Arabic word order takes the Verb + Subject + Object pattern. In the aforementioned example, the localizer did not come to the conclusion of whether to use the Arabic sentence pattern or stick to the original English sentence pattern. The sentence "يوجد انسان خلف كل مهداف"consists of a Verb + Subject + Adverb of place + Complement. This is the right way to translate this form of a sentence where in Arabic the preference is for the verb to come as an opening of a sentence. However, the localizer was in a doubt about whether to change the order or stick to the original when he/she repeated "يوجد انسان" twice. In the sentence above, "خلف كل مهداف يوجد انسان", the translator here kept sticking to the word-by-word translation. The same sequence of word order as the original is applied, thus causing a serious problem for the readers. In conclusion, all the localizer needs to do is delete the second "يوجد انسان"and keep the sentence, see appendix (B).

3.9.6 Translation Errors in Language Layout

Many non-English speakers who are citizens of Arab countries have the urge to explore the video game layout. Due to the fact that it is being automatically directed to the ST (English) and the choice to scroll through it is only pointed towards the original language, there is no easy way of doing that for anyone who is unable to read English. One of the main errors encountered by video game localizers is the length of the Arabic text which causes a serious problem. Unlike the English language, the translation of UIs requires more space in the Arabic language due to their expressive nature.

The user interface texts include menus, help screens, system messages, etc. Translators should maintain the same number of characters more or less according to the UI space, it was written in, as the ones in the original.

Many localizers tend to localise video games in the same manner as in English. That is, they resort to literal translation from English into Arabic but they do not take the Arabic language standards into consideration in order to limit the number of characters that are input in the video game layout. Localizers tend to use a shorter translation to fit the available space often with a fixed width. This method would affect the translation which makes it sometimes not understandable or vague for an Arab video gamer. The following is an example from PUBG: Mobile (2018) UI Web Section, see appendix (A).

As mentioned previously, the localizers bound themselves to the ST space constraints that are to stay loyal to the original. In the example above, it would take more space if the localizer tended to translate the text communicatively instead of literary. The translation provided by the localizer is not understandable and neither clear and it would leave the Arab gamer wondering what the video game developers intend to deliver.

This linguistic issue can be solved by offering specialized programs to the localizers where they can modify the space constraints of the UI, thus making them more suitable for a better understandable translation according to the TL rules with more details. The following is a more acceptable translation, see appendix (B).

In the suggested correction, the TT focuses more on the text function, thus making it easier to read. To make the meaning of the ST clearer and easier to understand, the translator has to replace these meanings instead if omitting them. In order for a UI translation to be successful, it must meet the functional requirements of the original but the translator has to make sure there is no room for ambiguity. This points out that space has to be reserved to meet these character requirements while designing a multilingual UI for a video game. The non-English versions of the video game UI need to be improved if they are to be fully equipped with equivalents to their original versions. That is, there is a need to apply an adaptation method to the UI in order to give it a more expandable space feature.

Chapter Four

Conclusion and Recommendations

4.1 Conclusion

The main purpose of this thesis was to highlight the difficulties that face the localization process of video games from English into Arabic and the linguistic problems in particular. To that end, the researcher by provided several examples to illustrate these problems and difficulties.

The conflict emerges when big video gaming companies decide to recruit the right localization professionals. In case they were not, they would not provide a localized video game with top quality, thus leading to unwanted confrontations with the target audience gamer base, both linguistically and culturally. Another problem arises in the UI as well as the subtitles layout which takes into consideration adaptability to language font, space, and writing (left to right or right to left). In addition, there are many linguistic challenges and errors that may emerge while localizing both the graphics and text.

In light of results of data, we can therefore conclude that most localized video games suffer from bad/poor translation quality, thus depriving most Arab gamers of enjoying the playthrough of the localized versions of video games. As mentioned before, the language font, space, and writing (left to right or right to left) are challenges that face the translation of UI textual materials and subtitles.

The localization process is connected to software localization as well as the translation of audio-visuals. Listing the characteristics of video game localization is important to provide a clear idea. Adding the main assets of video games helps in identifying the main aspects related to their localization. There are four localization models: the sim-ship, post-gold, outsourcing, and in-house models. Each of them differs greatly from the others. They all have to deal with time as well as space constraints. This has posed a serious challenge since most video games nowadays contain UI menus, long dialogues and a gameplay story. In addition, most localizers also face a problem with timed deadlines put on the localization process.

Moreover, many localized video games turn out to be a failure due to cultural issues. They cause a major upset on the localization since many localizers choose to stick to literal

translation rather than communicative translation for many language expressions. As a result, the Arab gamers reject these translations due to their incompatibility with Arabic language standards and norms.

Most localizers tend to follow their own methods without taking into consideration the recommended translation techniques. Many localizers also suffer from a lack of experience with the localization of video games which is not always available for video game developers. Video game developers usually tend to look for localizers with background experience in the field of video games and their translation.

Pertaining to the linguistic challenges, the main challenge is the transference of term meaning. Many gamers choose an SL term for their text and treat it as if it originally came from the TL which sometimes might lead either to transliteration or an undefinable equivalent. The second challenge is dealing with block letters that are faced by UI incompatibility between the ST and the TT. While the English language consists of alphabets that are separated but close to each other in order to create a meaningful word, Arabic mainly consist of conjoined letters that are linked together to make a meaningful word, known the cursive style of writing. The problem here is that many video games UI software do not support font and size for foreign language writing styles (Arabic) other than the ones which include Latin alphabets.

The third challenge can be seen in the translation of variables. A linguistic variable is added letters that give a word different pronunciations in different communities. The main issue here is that translated strings have to be more grammatically logical without any consideration of what text includes later when replacing the linguistic variables.

The fourth challenge can be seen in the localizer's wrong choice of words when he or she translates. This can occur when the localizer chooses inaccurate and misleading words and phrases that do not match both the ST text grammar and spelling.

The final challenge is the lexical problems. Many video games suffer from the difficulty of rendering some lexical items. Both collocations and transliteration were taken as the main lexical problems here. Collocation is a lexical item that inclines to remain correlated together with other words in the same sentence. The problem with collection is the difficulty a word faces due to having multiple meanings as known as a collocational

pattern. In some cases, the localizer provides a literal meaning that makes the word unnatural. This is considered the worst decision made due to overlooking the context of the text. In contrast, transliteration involves the process of naturalizing a term or a proper name at the phonetic level. Many terms suffer from a lack of a unified method for giving a proper translation for such terms into Arabic. That leads to creating unstable transliterations in case of its translation by more than one person.

The final section discussed linguistic errors that the video game localization process faces. These linguistic errors have to do with linguistic accuracy, translation of culture-specific expressions, errors in translation of proper names, repetition of lexical items, word order, and alphabets layout.

The first error is related to linguistic accuracy in the translation of video games. The field of video game translation suffers from the lack of specialized dictionaries in terminology of gaming. This issue may have a bad impact on foreign Arab gamers when dealing with similar specific terms and many of them usually will not be understood precisely according to their context of gaming.

The second error emanates from the translation of culture-specific expressions. These expressions mainly take into consideration both linguistic as well as cultural ranges according to region, traditions, religion, and everyday language. This area of translation also goes beyond the textual material it includes. Many cultural expressions in video games were either not translated properly or ignored due to the fact they do not have any exact equivalents.

Thirdly comes the translation of proper names. Video games depend a lot on the use of characters that are differentiated by their own names whether they are main or minor characters. Most names are transferred, using transliteration which brings us back to the lexical challenges mentioned before. While proper names are distinguished by capital letters to highlight them from the rest of the text, the Arabic language does not include the same as the first and they are transferred phonetically in the same way as they are with no translation or replacement.

The fourth error occurs in the repetition of lexical items. This type of repetition is viewed as a process of redundancy, and it is more common in Arabic than in English.

Conjunctions were taken as the primary example in this field. It is a major issue for non-natives. It emerges from the differences between both English and Arabic. The Arabic language is known for the overuse of conjunctions. This problem arises in UIs in particular.

Another error rises in the translation of word order. While English acts as an SVO language, Arabic sticks to the VSO order. The main problem here is that the TL does not comply with the influence of the SL word order.

The final translation error emanates from the language layout. In many cases, Arab gamers struggle with terms related to the video game layout. A lot of them do not have enough knowledge of the English language. That would leave them stunned if they did not understand the context. Unlike English, the Arabic UI layout requires more space. Besides, the localizers are obliged to consider limiting the number of characters (letters) more or less according to the space constraints of the original UI. This leads the localizers to stick to literal translation without taking into consideration the Arabic language standards.

4.2 Recommendations

After a critical analysis of different examples provided in the SL text as well as the TL texts, the researcher recommends the following:

- Localizers should be more consistent in their language choices by considering the cultural differences between the two languages: Arabic and English.
- Localizers are expected to have enough experience in the field of video game translation. They need to have enough awareness of the TL and SL they are interacting with. Both linguistic as well as cultural aspects of localization should be taken into account to shed light on the whole text and its meaning.
- Localizers should have a good idea of the gamer audience's needs in order to choose the best translation methods.
- Most localizers need to start considering the TL norms carefully in order to prevent any mistranslations or mistakes.

- Relevant parties, like specialized translation companies, should provide more dictionaries and specialized software programs that deal with gaming text terminology and their properties.
- Video game companies should choose teams which possess good communicative experience in order to deal with creative mindsets. Their job is to carefully analyze and adapt the product with no mistakes.
- Video game companies should open the door for localizers to provide additional translated content to clarify misunderstood concepts like game menus, tutorials, and user manuals to make it easier for Arab gamers to digest them.
- Small localizers who are still fresh in the field of video game localization should work with localizers who have more experience and good training courses to give them a basic understanding of the differences between English and Arabic languages and their cultures.

List of Abbreviations

Abbreviation	Meaning
ST	: Source Text
TT	: Target Text
SL	: Source Language
TL	: Target Language
PC	: Personal Computer
(CS: GO)	: Counterstrike: Global Offence
PUBG	: Player Unknown Battle Ground
GILT	: Globalization, Internationalization, Localization, and Translation
US & UK	: United States of America and the United Kingdom
WWII	: World War II
NES	: Nintendo Entertainment System
AV	: Audio-Visual
SCE	: Sony Computer Entertainment
PS	: Play Station
AAA	: High-budget, High-profile Video Game
PSV	: PlayStation Vita
MMOs	: Massively Multi-Player Online Games
UI	: User Interface
NPC	: Non-Playable Character
QA	: Quality Assurance
BR	: Battle Royale
SVO	: Subject + Verb + Object
VSO	: Verb + Subject + Object

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Appendices

Appendix (A)

Figures

Figure (11)

Shadow of the Tomb Raider UI Translation

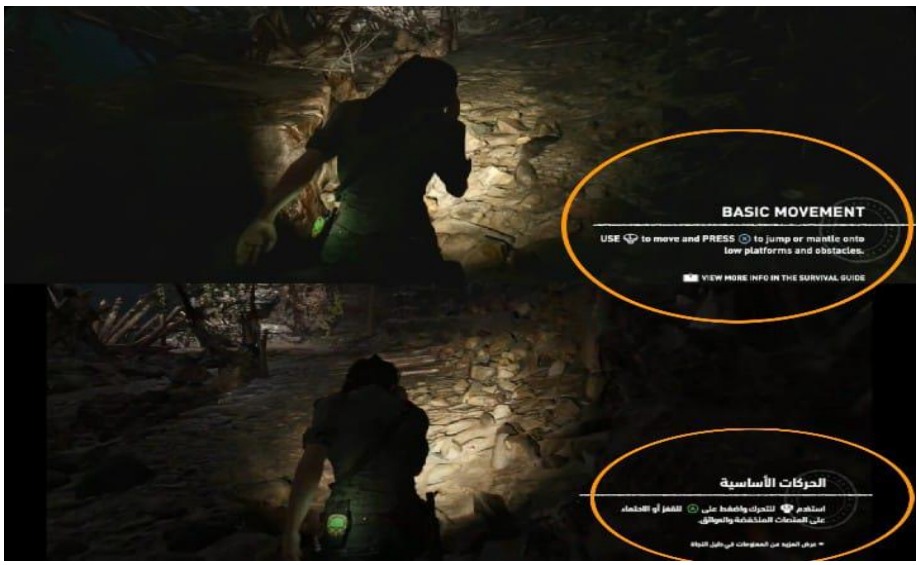

Figure (12)

Comparison between Video Game Button Layout and Its Controller Counterparts

Figure (13)

Dying Light 2: Stay Human Version and Its Translation

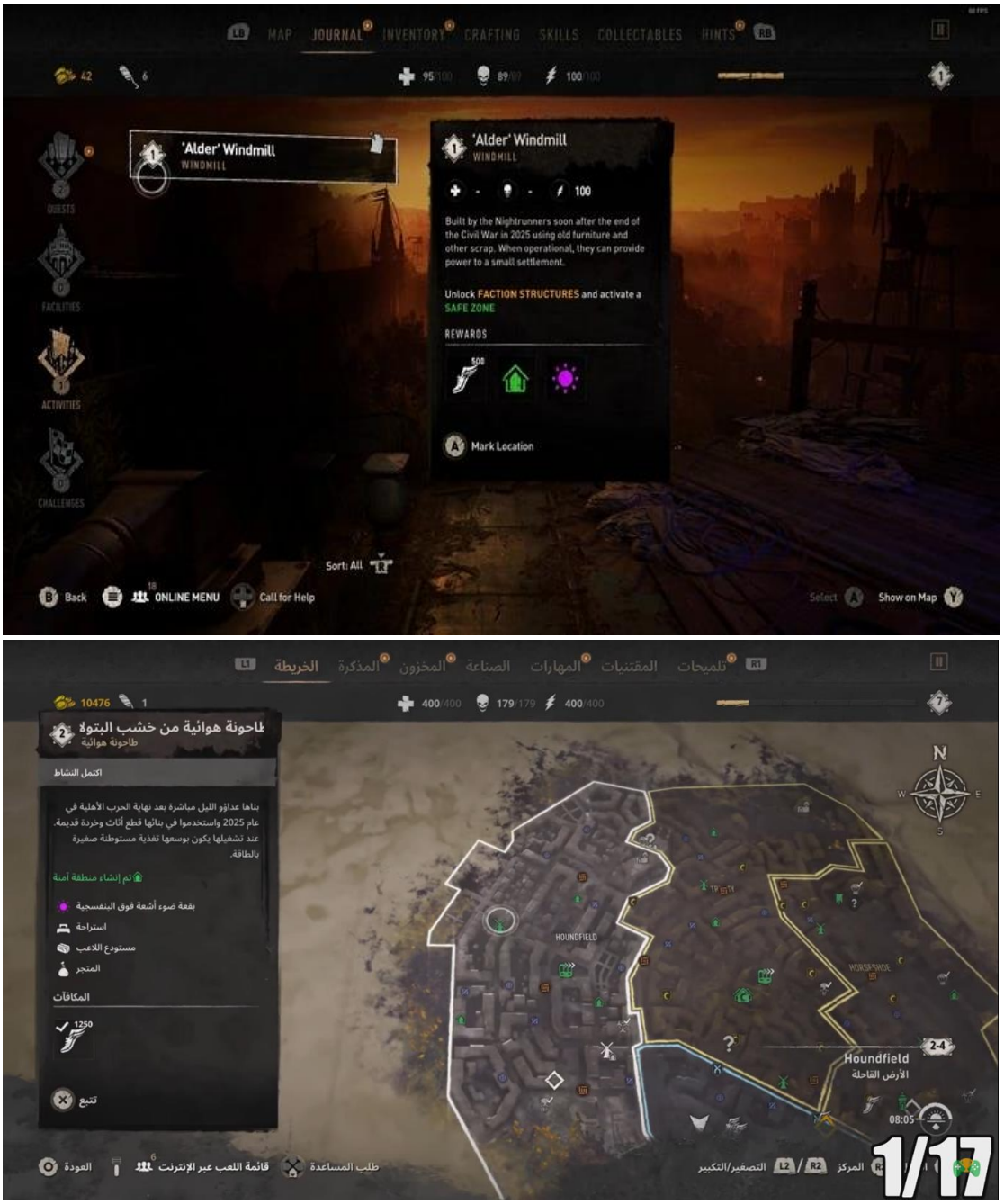

Figure (14)

Dying Light 2: Stay Human's Alder Wood Windmill

Figure (15)

Ghostwire: Tokyo – Prelude NPCs Dialogue

Figure (16)

Battlefield 3 Textual Graphic

Figure (17)

Detroit: Become Human Audio and Cinematic Assets

(https://www.youtube.com/watch?v=5wS_XgZjfV8)

Figure (18)

Batman: The Enemy Within Block Letters Issue

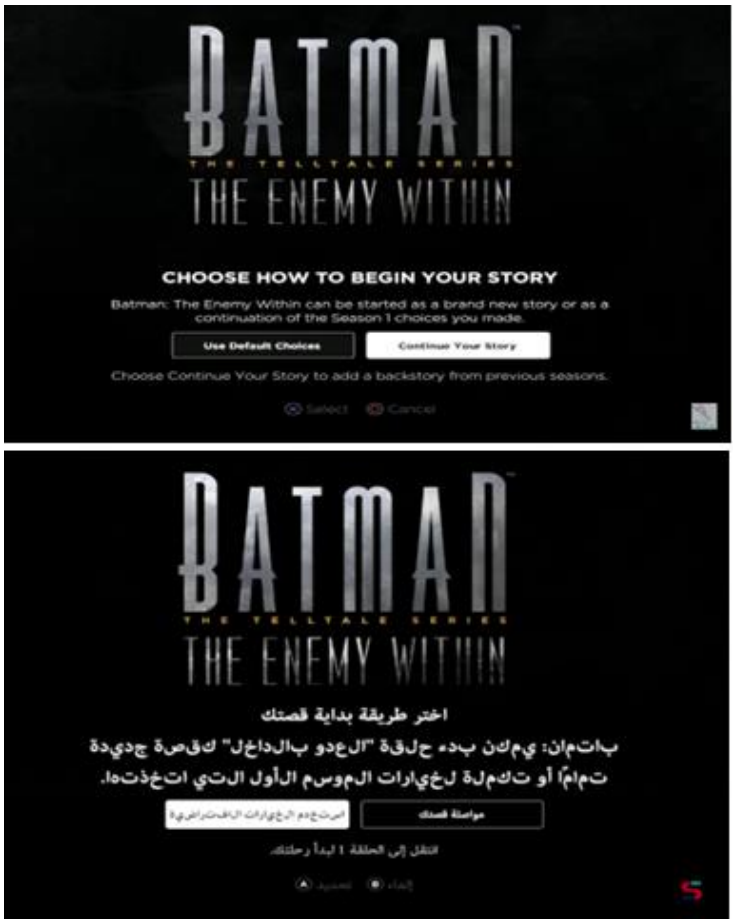

Figure (19)

Batman: The Enemy Within Comparison between UI and Gameplay Options

Figure (20)

Naruto Shippuden: Ultimate Ninja Storm 4 English and Its Arabic Counterpart

Figure (21)

Call of Duty: Mobile Settings Layout in English and Arabic

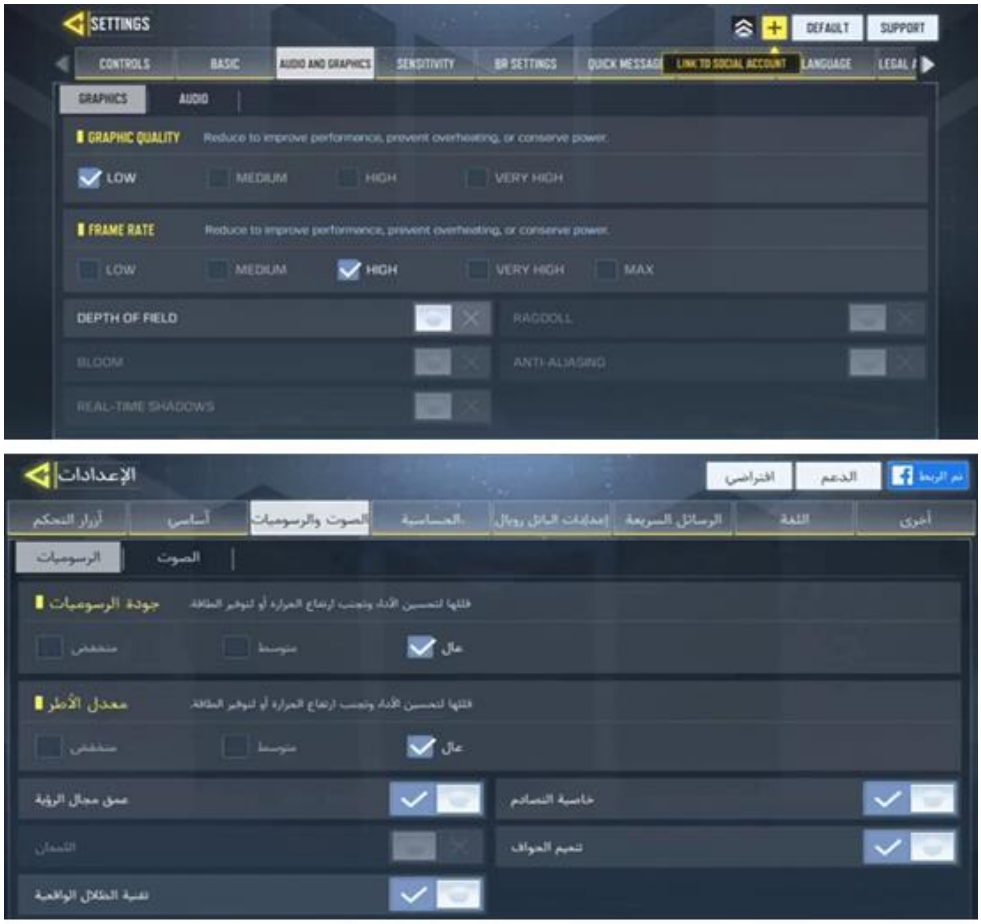

Figure (22)

Uncharted 3: Drake's Deception Use of Cultural-specific Expressions

(https://youtu.be/Rl_vG9TNYQc).

Figure (23)

God of War Ragnarok in English and Arabic

Figure (24)

Call of Duty: Modern Warfare Use of Proper Names

Figure (25)

PUBG's Official UI Repetition of Lexical Items

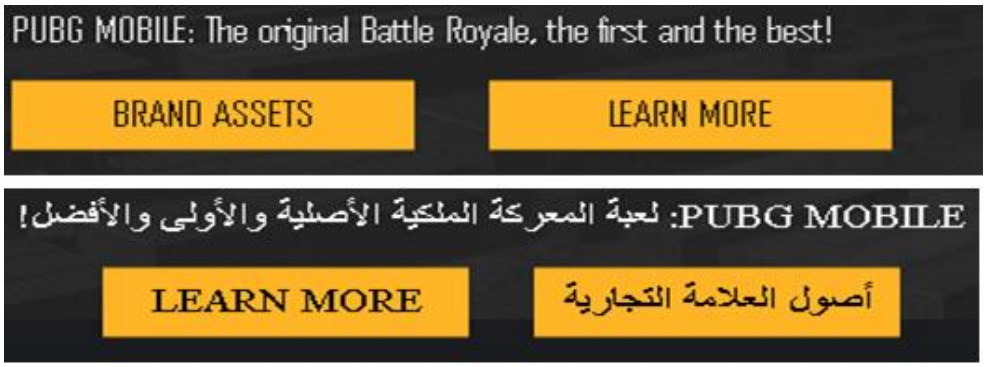

Figure (26)

Battlefield 1 in English and Its Arabic Translation

Figure (27)

PUBG: Mobile UI Web Section and Its Translation

Appendix (B)

Tables

Table (11)

Translation of the Term "Chakra" from Naruto Shippuden: Ultimate Ninja Storm 4

ST (English)	TT (Arabic)
Chakra	تشاكرا

Table (12)

Different Phonetic Pronunciation for the Term "Chakra" from Naruto Shippuden: Ultimate Ninja Storm 4

ST (English)	TT (Different Arabic Transliterations)
Chakra	تشاكرا شقرا شاكرا ألشكره الشاكرة

Table (13)

Suggested Translation for the Term "Chakra"

ST (English)	TT (Suggested Arabic Translation)
Chakra	مستوى النشاط الحيوي

Table (14)

Call of Duty: Mobile Setting Options and Their Suggested Corrections

Word (ST)	The Given Translation	Correction (TT)
Graphic Quality	جودة الرسوميات	جودة التصويرية
Anti-Aliasing	تنعيم الحواف	صقل الحواف
BR Settings	اعدادات الباتل رويال	اعدادات المعركة الملكية

Table (15)

Suggested Translation of Ramses's Culture-specific Term

Arabic (ST)	English (TT/Suggested Translation)
يا صباح الفلافل والحمص والبابا غنوج	Wakey, Wakey, Eggs and Bakey

Table (16)

Suggested Translation for "Give Me God of War"

ST (English)	TT (Arabic)	TT (Suggested Translation)
Give me God of War	أريد إله الحرب	أريد حرباً دموية

Table (17)

Suggested Translation of PUBG's Official UI

ST Sentence	TT Sentence	TT (Correction)
The Original Battle Royal, the first and the best!	لعبة المعركة الملكية الأصلية والأولى والأفضل!	لعبة المعركة الملكية الأصلية، الأولى والأفضل!

Table (18)

Suggested Translation for Battlefield 1 Example

ST Sentence	TT Sentence	TT (Correction)
But behind every gunsight is a human being.	الا انه يوجد انسان خلف كل مهداف يوجد انسان.	الا انه خلف كل مهداف يوجد انسان

Table (19)

Suggested Translation for PUBG: Mobile Example

ST (English)	TT (Arabic)	TT (Correction)
Report player and block player function description	اصلاح العميل وتجنب تعديل الملفات	الإبلاغ عن اللاعبين الغير قانونيين ومنع التعديل على ملفات المستخدمين

جامعة النَّجاح الوطنيَّة
كليَّة الدّراسات العليا

التحديات اللغوية التي تواجه توطين لغة ألعاب الفيديو من الإنجليزية الى العربية

إعداد
صقر اسامه صبحي عوده

إشراف
د. عكرمة محمد شهاب

قدمت هذه الرسالة استكمالا لمتطلبات الحصول على درجة الماجستير في اللغويات التطبيقية والترجمة بكلية الدراسات العليا في جامعة النجاح الوطنية في نابلس، فلسطين.

2023

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الملخص

نمى مجتمع الألعاب العربي بشكل مستمر بعد الانتشار الهائل للأجهزة الالكترونية منذ أكثر من عقدين. أدى ضغط الاقران ما بين الشباب العرب الى تفضيلهم أجهزة الكمبيوتر الحديثة ووحدات التحكم عن بعد والهواتف الذكية. كما أدت رغبة اللاعبين العرب في لعب العاب الفيديو أكثر الى قيام المطورين بوضع أهداف جديدة لتوطين العاب الفيديو من اللغة الإنجليزية الى العديد من الإصدارات في اللغات المستهدفة الأخرى، مما أدى الى ابتكار مجال جديد في الترجمة يعرف باسم عملية توطين ألعاب الفيديو. تتناول هذه الاطروحة عملية توطين ألعاب الفيديو، حيث قدمت فرصة لألقاء النظر على عملية الترجمة من اللغة الإنجليزية الى العربية. بالإضافة الى سعيها الى فهم كيفية تعامل الفئات العربية المستهدفة مع العاب الفيديو، وما التحديات اللغوية التي تواجهها. ركز الباحث على التحديات التي تواجهها عملية التوطين عن طريق طرح العديد من الأمثلة الأكثر شعبية في مجتمع العاب الفيديو. تطرق الباحث أيضاً الى مناقشة التحديات اللغوية والعلاقة بين المسائل اللغوية والثقافية والاصطلاحية والتقنية، من اجل اقتراح حلول أفضل للمشاكل التي تتعلق بتوطين مصطلحات العاب الفيديو وإظهار الفجوة ما بين اللغة الأم واللغة المستهدفة التي تواجهها عملية التوطين، خاصةً إذا لم يتم توطينها من قبل مترجم محلي ذو خبرة.

الكلمات المفتاحية: توطين لغة العاب الفيديو، العاب الفيديو، عملية التوطين، اللغة الإنجليزية، اللغة العربية، المترجم القائم على عملية التوطين، التحديات اللغوية.