The *Unsung Kingdom* Translation Project
Designing an Effective and Sustainable Classroom Activity for a Japanese Video Game Translation

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Abstract   This paper presents the experience of the design of a didactic activity for the translation of a Japanese video game in Italian, carried out in 2020 during the first year of the Japanese language course of the Master's Degree Programme in Languages and Civilizations of Asia and Mediterranean Africa at Ca' Foscari University. The described protocol allows the design of video game translation sessions as a teaching activity, overcoming some typical technical and organisational problems. One important issue this paper addresses involves the possibility of reviewing the translation within the game, which is fundamental to understanding how to translate texts for this medium. The paper will also give an overview of the translation issues that students encountered during the activity and of how they solved them. Finally, the results of a survey will show whether the implemented protocol and classroom activity were satisfactory for the students and how they can be improved.

Keywords   Digital Humanities. Translation. Games translation. Translation studies. Instructional design. Japanese language. Language teaching.

Summary   1 Introduction. – 1.1 Translating a Video Game as a Didactic Activity. – 2 Identifying a Japanese Game to Translate. – 3 Designing a Translation Protocol. – 3.1 Files Structure. – 3.2 Designing a Translation Activity. – 4 Designing the Script Implementation Procedure. – 4.1 Google Sheets API. – 5 Analysis of In-Game Translations. – 5.1 Text Too Large for the Interface. – 5.2 Grammatically Correct Translation, but not Suitable for the Context. – 5.3 Message Styles and Variable Management. – 5.4 Non-Linear Dialogues. – 5.5 KingParse Errors. – 5.6 Terminology. – 6 Survey. – 7 Conclusions.

1 Introduction

Since its beginnings in the 1960s, when computer scientists designed simple games and simulations on mainframe computers, the video game industry has grown and become an increasingly popular form of mass entertainment, as well as a multibillion-dollar industry. In fact, according to the Italian Interactive Digital Entertainment Association (IIDEA), in 2021 the video game entertainment industry generated revenues of 2 billion and 179 million euros (21.9% more than the previous year) (IIDEA 2021), while the value of the video game industry in the United States for the same year is estimated at $65.49 billion dollars (Statista 2021).

Nowadays, there are various genres in the video game market. Some of these, such as role-playing games (RPGs) or visual novels, are characterised by a considerable amount of text necessary for the description of the story as well as for the characters' dialogue, for the names of weapons, spells, and artefacts that can be traded, and so on. Especially in the last two decades, the popularity of some titles from these genres has led companies to translate games into other languages. However, when translating video games, other factors besides the translation usually need to be taken into account, such as the "cultural adaptation of digital content to the requirements and environment of a foreign market" (Gambier, van Doorslaer 2010, 209).

As Hevia Mangiron writes, "[i]t is widely acknowledged that one of the main causes of success of games is their internationalization and globalization, a process in which localization has played a key role" (Hevia Mangiron 2007). Localisation, however, implies the need to pay attention to the translation as well. According to Gómez Aprile, for example, the quality assurance process related to the localisation of a video game must consider three aspects:

a. "Linguistic QA such as grammar, spelling punctuation, issues with numbers, inconsistent translations, taboo language, etc.
b. Visual QA such as truncated characters, font issues, overlong strings, UI/UX issues, untranslated parts, platform compliance.
c. Functional QA such as keyboard issues, misleading links or commands, game performance, corrupted audio, misdisplayed text". (Gómez Aprile 2021)

Mostly a) and largely b) are issues handled by the game translator.

As Dunne writes: "Games are not just worlds, but backdrops for actions taken by the player [...] the main functions of language in the game are to lead the player onward to give instruction, to provide clues and to motivate". One factor to consider in games is that they "can be non-linear, giving the player the opportunity to find his or her own way through the world of the game" (Dunne 2006, 124).

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Annali di Ca' Foscari. Serie orientale   e-ISSN 2385-3042
58, 2022, 947-978

Game localisation should consider also other important parameters, such as: terminology (123), the space for the text allowed by the interface, the genre conventions of the game to be translated (126) and cultural issues.

The space for the text may represent a major constraint especially when the game interface is originally optimised for languages that make use of characters with semantic values, such as Japanese; for instance, kanji compounds of only two characters such as *kōgeki* 攻撃 (attack), *bōgyo* 防御 (defense) require, respectively, 8 and 6 characters in Italian (namely 'attacco' and 'difesa').

Moreover, the non-linear 'narrative' element of video games, which Bissell (2010) calls "ludonarrative", may require long testing sessions accomplished by both the translators themselves and a proposed quality-control staff to verify the consistency and the 'playability' of the text that may lack important information needed to complete the tasks or that may not have been sufficiently engaging for the players.

For all these reasons, being able to verify the translated text inside the game is a fundamental requirement for game localisation.

1.1 Translating a Video Game as a Didactic Activity

As teacher of the first year (second semester) of the Japanese Language course of the Master's Degree Programme in Language and Civilisation of Asia and Mediterranean Africa at Ca' Foscari University (a.a. 2020-21), whose training objectives are within the area of language skill learning and translation, I reorganised the course by inserting audiovisual and Japanese video game translation activities, in addition to the prose translation which is usually covered during the course. The activity of translating video games was designed because of the strong demand by students in class.

In fact, normally, video game translation is not covered in curricular courses, but I thought that allowing students to acquire this type of skill might represent a particularly innovative formative experience. First, it means allowing them to experiment and understand, through an active learning process, how the medium (in this case, the video game) may influence the translation process; secondly, it could allow them to learn about a professional activity related to their study curriculum; thirdly they may acquire several skills, as previous studies on the VGLOC (Video Game Localization Course) suggest; among others: students a) will be able to analyse the context of a video game; b) will be able to handle localisation kits used in a VGLOC project; c) will be familiar with the different types of text found in video games and their characteristics, as well as how to produce texts that work in the target game; and d) will be able to deal with the restrictions found in video game assets, such as spa-

tial limitations of the graphical user interface, use of variables, text fragmentation, etc. (Granell 2011). Indeed, as will be set forth in the following paragraphs, the issues in these points will be considered and addressed by the students.

However, organising the translation of a video game as a didactic activity is a particularly complex task. Studies of interlingual subtitling, and audiovisual translation in general, indicate that this activity in itself requires: "l'elaborazione complessiva di un prodotto multimediale, e non solo delle sue componenti linguistiche" (the overall processing of a multimedia product, and not just its linguistic components)[1] (Heiss 1996). Moreover, there is little literature on the phenomenon of video games translation as a teaching activity, and few established guidelines, especially for Japanese: "[t]he scarcity of VGLOC courses available at the moment is paradoxically opposed to the growing demand for video games in every language" (Granell 2011, 188), yet VGLOC courses are offered by private institutes in Europe and the UK, as well as in the United States, and academic literature has for the moment been identified for Brazil (Esqueda, Stupiello 2018), Spain (Granell 2011) and the Netherlands (Sleegers 2018). Nevertheless, it is possible to draw on studies of audiovisual translation in general for the translation of 'cutscenes' (i.e. cinematic sequences) in video games. In this case, as Vitucci (2013) suggests, an effective interlingual translation may be based on three fundamental moments, namely: 1) the reduction of the text; 2) the diamesic transformation (transition from oral to written code) and 3) the actual translation.

However, it is undeniable that video games possess also original aspects to deal with, such as more or less limited text interfaces, non-sequential dialogues (where the same text can appear or stop several times depending on the needs of the player), and the usage of variables to represent text entered ad hoc by the user for their name, gender or country.

There are also important technical aspects to consider. For instance, the process of transferring translated text into the game may represent a particularly challenging and time-consuming technical problem. Especially in case of a didactic activity, this task, which normally requires public access to the game code or scripts and an underlying technical and organisational process, is usually difficult to implement due to the lack of funds, time, and expertise. Commercial programs for games translation aid called CAT (Computer Aided Translation) do exist but work with limited file formats and structure: "[i]t is worth mentioning that there is no standard format of files in the industry of video games, it all depends on each game developer and publisher" (Esqueda, Stupiello 2018, 110).

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[1] If not otherwise stated, all translations are by the Author.

Thus, considering the challenge of designing such a didactic activity, the consequent research question would be the following: how to design a video game translation classroom activity with formative outcomes (such as those set out in points *a* and *d* above), with limited funds and time.

The problems to be solved are of a technical and economic nature, where 'economic' is not only intended as a cost in terms of money, but also of time and effort. There are three primary problems:

a. Identifying a Japanese game to translate.
Economical requirements: sustainable implementation, copyright free code, access to translation scripts.
Game requirements: a game with a lot of text and relatively little action (RPG type is probably the most suitable).

b. Definition of a translation process for the students, i.e. identification of a translation platform, definition of a homework assignment schedule, definition of roles.
Economical requirements: low-cost, high-performance platform for collaborative writing.

c. Definition of a script implementation procedure.
Economical requirements: identifying a low-effort way to implement the translated text into the game.

2 Identifying a Japanese Game to Translate

Video games have historically been distributed in the form of executable compiled code. Although this on the one hand optimises the speed of execution of the game, on the other hand it is dependent on the architecture of the computer on which it is run and its operating system.

Using games distributed in this format in education would mean that the teacher would either have to verify that they can run on all students' computers, or would have to provide compiled versions for different architectures. Also, the teacher would have to be responsible for releasing a new version of the game (compiled for different OS architectures) to be made available to the students. This approach is clearly not sustainable. For this reason, I have narrowed the scope of my research to online video games, playable through a browser, where compatibility issues are minimal. In fact, in this case, the game is online, and it is not necessary to install any programme; it is sufficient that the device has a recent browser installed. This solution also solves the problem of compatibility between operating systems.

However, there remains the problem of identifying a video game whose source code is released (possibly for free) and whose license allows for modification and reuse. To identify the software, therefore, after a broad review of the pages of traditional game makers, I

looked for a possible candidate within GitHub, a free service for hosting versioned code via GIT.[2] GitHub, established in 2014, had already become in 2018 the largest code host in the world with 5 million developers across 10 million repositories (Gousios et al. 2014), whereas the latest statistics for 2020 count 40 million developers and 100 million repositories (Smith 2021). By filtering the GitHub database with the following requirements – free online Japanese game, free GPL or MIT license,[3] text-centric RPG type, easy server installation – I identified as a valid candidate the game *Unsung Kingdom* (Laineus 2020).

Unsung Kingdom, developed by an independent game maker under the nickname of Laineus, is a 2D RPG released in March 2021, whose structure and game play somehow reminds of the first episode of the Final Fantasy series developed by SquareSoft in 1987. There is not much information about the game's story aside from a small introduction on the game's page in the Steam platform. However, during the game introduction and first scenes, the player learns that the Kingdom of Bellion has fallen into ruin after the death of the King, and three travellers arrive from the future to prevent the King from being assassinated in the past and thus to save the Kingdom in the future.

The player impersonates Ann, who guides the other two characters around the world of Bellion, among cities, palaces, forests and ruins, to discover the plot behind the King's murderer.

Following the standard of RPG video games, the players can upgrade their characters' weapons and collect potions or other items to heal and enhance their character.

Multiple types of text can be identified within this game:
a. Linear narrative: introduction of the game, introduction of each new level, initial dialogues between characters
b. Non-linear narrative: secondary dialogues with characters, which appear when they are questioned by the player
c. Terminology: system messages, names of places, weapons, potions, levels, clothes, enemies, monsters
d. Text merged into the game graphics: special messages (victory, defeat), goals achieved, etc.

Unsung Kingdom is well suited for translation. In fact, the game is divided into 6 chapters, and the entire first chapter contains little action and many text sections. This allows the initial translation of considerable blocks of text without any operational hindrance.

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2 Git is the most widely used modern version control system. For further details refer to *Pro Git* (Chacon 2009).

3 MIT and GPL refer to licenses under which software is released that allow reuse of source code normally free of charge.

3   Designing a Translation Protocol

In order to systematically translate a game, it is necessary to define a translation protocol that implies some rules and conventions to which translators should adhere, such as: definition of shared working tools, definition of working methods, and definition of tasks.

In the case of a classroom teaching activity, it is advisable to use a collaborative writing tool that allows students to check the work of their peers, as well as to work on the same workspace without copying and sharing individual files subject to loss or duplication. However, it is also important to implement a tool that students are already familiar with, or should be familiar with, to minimise familiarisation time loss with these tools. In addition, the collaborative writing tool should also permit the text to be organised in such a way as to reproduce the hierarchical structure of the original scripts as much as possible. This in order to facilitate the task of implementing translations into the game.

In the case of a company with available people and resources, the text can be provided to the translators in word or plain text format, and the translator will be asked to translate following a similar template. It will then be the task of the technicians to take the text and insert it inside the game scripts. One solution for the didactic activity could be to identify a candidate among the students who is in charge of inserting the text into the scripts of the game, but this solution can be dangerous because if the text is inserted directly in the code, the accidental deletion of even a few characters may block the whole game, thus requiring a time-consuming debug process to find the causes. Therefore, in the interest of allowing students to focus on the translation process and ensure a smooth text implementation process, I decided to make use of Google Sheets as a collaborative software for translations and to create an automatic system that codes students' translations into the required format for *Unsung Kingdom*.

There are several options that allow access to use online spreadsheets, such as Zoho Sheet (`https://www.zoho.com/sheet/`) and Microsoft Office Excel Online (`https://www.office.com`), but I chose Google Sheet as it can be freely used by Ca' Foscari University students through their academic account, so many of them presumably already know how to use it. As a spreadsheet, it permits replication of the hierarchical structure of the original text contents and that is why it can be easily adapted for the needs of this project.

After downloading and installing *Unsung Kingdom* as a server web application[4], I proceeded to analyse the code that contains the text to be translated.

After having identified the presence of the original translation files in the directory [locales]-> [ja] (Japanese), I created the [it] folder as a place for the new Italian translations. This folder must contain the same number of files with the same name present in the [ja] folder, namely: index.js, room.js, town.js, chapter0.js, chapter1.js, chapter2.js, chapter3.js, chapter4.js, chapter5.js. The .js extension means that the files are written in JavaScript.[5]

Index.js is the biggest file as it contains all system messages, room.js contains the texts of the dialogues in the inn, town.js the texts related to the dialogues of the characters in the town, and chapters 0 through 5 files are related to the texts and dialogues of each chapter.

3.1 Files Structure

Since the index.js is a very large file, I created a special Google Sheet dedicated to translating its content. In fact, the index.js file not only takes care of loading the other files containing the texts, but also defines the translations for the basic elements such as city names, missions, weapons, skills, characters, GUI (Graphic User Interface), as well as the introductory story and descriptions of each mission. Each JavaScript file has the game text organised in multidimensional data structures called objects.

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4 The installation of *Unsung Kingdom* took place on a remote Linux-type server. It is not the purpose of this article to describe the installation process and the additional software dedicated to its operation.

5 For details on JavaScript language and its use see Crockford 2018.

```
export default {
  langLabel: '日本語',
  chapter: [
    { name: '序章', title: '王殺しのジャック', sub: 'Jack the Kingkiller' },
    { name: '1章', title: 'ワルカノの森', sub: 'Warkano Forest' },
    { name: '2章', title: 'トロイア公爵邸の地下通路', sub: "Troia's Secret Passage" },
    { name: '3章', title: '聖アンテルスの墓地', sub: 'Catacombs of St Anterus' },
    { name: '4章', title: 'グリファルデ神殿', sub: 'Temple of Grefalde' },
    { name: '終章', title: '平和王エドガー', sub: 'Edgar the Peaceful' }
  ],
  area: {
    town: '王都',
    castle: '王城 - 裏庭',
    forest: 'ワルカノの森',
    underpass: 'トロイア公爵邸の地下通路',
    catacomb: '聖アンテルスの墓地',
    temple: 'グリファルデ神殿'
  },
  areaSub: {
    bellion: 'ベリオン王国',
    room: '拠点',
    forest: [
      a: '東部',
      b: '狩人の高台',
      c: '高台北',
      d: '広場',
      e: '南部',
      f: 'キャンプ',
```

Figure 1 Unsung Kingdom. Portion of code related to place name definition contained in index.js. Note that the game text is embedded in the programming code

As can be seen from the image representing a portion of code from the index.js file, data is not homogeneous. The [chapter] object is an array[6] that contains multiple objects with three keys (name, title, sub), the [area] object contains only single keys → values records, while the [areaSub] object contains both single records and sub-objects (e.g. [Forest]).

Precisely because of this inhomogeneity in data representation, the Google Sheet file, created for index.js text translations, contains as many sheets as the top-level keys of this file.

For instance, the [chapter] sheet is organised in this way: the green section is the one to be translated, the yellow section is the one where the Italian translation must be inserted by the students. Before translation, of course, the yellow area is empty.

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6 The array is a collection of items or 'boxes', each of which holds a single item of data. This data may be stored in the form of objects each identified by a key and a value.

Figure 2   An excerpt from the Google sheet [chapter] highlighting how the texts are organised

Note that two green columns (for name and title keys) must correspond to two yellow columns for translations. The white column corresponds to the sub key that must remain in English. The following figure represents the format for the [area] and [areaSub] tabs. Students are prohibited from translating or inserting text in the non-yellow areas.

Figure 3   Google Sheet, text organisation. The arrangement of the text corresponds to the organisation of the data in the original files. The yellow area is for text translation, and the green area is for the original text that should remain unchanged. White areas are used as keys to match the translation in the original code and must stay unchanged

All other texts in the game have been grouped into another Google Sheet file, divided in sheets according to the name of the other files: room, town, chapter0, chapter1, chapter2, chapter3, chapter4, chapter5.

Another Google Sheet was also created mainly for student use to indicate the agreed upon translation for particular places and/or characters. In fact, such elements appear often in the game and therefore it is necessary to always keep the same translation for coherence. This file is also used to report bugs in text conversions (see next paragraph) and comments or annotations on translation choices.

3.2 Designing a Translation Activity

The translation activity considered the following steps: a) definition of working groups, b) scheduling of translation activities, and c) translation and review.

The organisation of the working groups took place under my supervision, however students were very proactive in forming work groups and deciding which group to join. This is due to the fact that this activity started as a result of a request from the students themselves, who therefore had a particular interest in the project.

31 students participated in this project, divided into the following groups: Index/Intro/System messages: 4 students; Town messages/dialogues: 11 students; Inn messages/dialogues: 5 students; Chapter 0 messages/dialogues: 11 students.[7]

The activities were scheduled as follows:
- the teacher assigns translation activities to each group every week during the lesson;
- students have 5 days (including the same day as the classroom lesson) to translate;
- the teacher implements the text over the next day in the game code and notifies students when a new version of the game with updated translations is online via Moodle's group email feature;
- during the next lesson, translations are checked with students by playing the game in Italian and new translations are assigned.

The translation work is done by students directly on the yellow columns of the Google Sheet files in the sheets assigned to their group. The students work at home; however, during the revision of the work in class, it is possible to directly modify some translations upon the teacher's indication.

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[7] The discrepancy in the number of students in the groups is due to the fact that the length of the text to translate varies depending on the chapters.

Checking the translations in class by playing the game permits reflection on the specificity of the translations needed for the game. Students understand the validity of the translated text in the context of the game through a visual and kinesthetic activity, both directly (they play themselves) and indirectly (they see the teacher playing their translation in the classroom sessions). The dialogue activity with the students also allows them to discuss, for example, how localisation works in video game companies and what differences there are from the current classroom activity. Above all, however, they gain an awareness of how to translate for video games by learning through play, and consequently feel extremely motivated as they see their translation take shape within the video game. To a large extent, this project also led students to realise that they had acquired greater competence in Japanese-Italian translation (survey § 6, question 5). This link between motivation and competence is supported by theories of motivation such as Bandura's social-cognitive theory for which "most human actions are thought to be goal directed" (Bandura 1986) or Ryan and Deci's determination theory, for which intrinsic motivation is related to psychological needs, namely: autonomy, competence, and relatedness (Ryan, Deci 2000).

4 Designing the Script Implementation Procedure

Implementing the translated text into the game code, if done by hand, can take a long time. In fact, one must be very careful not to touch the areas of the text related to the computer code, which if changed may damage the whole game. Moreover, there should be a careful synchronisation between whomever is in charge of inserting the scripts in the code and the translators: if while a student is inserting the text in the code, some other student modifies a translation in the Google Sheet, it may become difficult to keep track of the differences. Finally, it is undoubtedly a particularly inconvenient, repetitive and time-consuming activity which, also because of these aspects, can generate errors (for example: copying the wrong sentence). For all these reasons I have avoided assigning this activity to the students, but I have created an automatic programme for importing the text from Google Sheet and recreating the code of the game with the translated text.

4.1 Google Sheets API

Google has made it possible to access the raw data in its online software suite through some dedicated Application Programming Interfaces and Definitions called API. In fact, as reported in the 'Google Sheets for Developers' page, "[t]he Google Sheet API lets you read,

write, and format Google Sheets data with your preferred programming language, including Java, JavaScript, and Python". After having created a free personal API Key[8] by using the following syntax:

```
https://sheets.googleapis.com/v4/spreadsheets/{{ID}}/val-
ues/{{SHEET}}!{{RANGE}}?key={{GOOGLE _ KEY}}
```

where {{ID}} is the Google Sheet ID, {{SHEET}} is the Sheet name, {{RANGE}} is the range of values to query, and {{GOOGLE_KEY}} is the personal Google key, it is possible to access the Google Sheet raw data. This allows, for example, to gather the raw data of the sheet [main] with the range A1:C7 as showed in the following output.

```
{
  "range": "main!A1:C100",
  "majorDimension": "ROWS",
  "values": [
    [
      "langLabel", "日本語", "Italiano"
    ],
    [
      "missionStart","『#{title}』を開始","Missione iniziata:
#{title} "
    ],
    [
      "missionComplete", "『#{title}』を完了", "Missione com-
pletata: #{title} "
    ],
    [
      "unlockArea", "マップ「#{area}」が解放された", "Nuova area
sbloccata: #{area}"
    ],
    [
      "gotItem", "『#{name}』を手に入れた", "Hai trovato #{name}"
    ],
  ]
}
```

---

8 It is possible to create a free personal API Key by accessing `https://console.cloud.google.com` with your Google credentials.

Data is returned as a string in JSON[9] format and can be transformed into a parsable object by using the syntax of the programming language used for the creation of the conversion programme.

In my case, to create the Google Sheet → Unsung Kingdom conversion programme that I called KingTrans, I made use of node JS, a language created and supported by Google itself that represents a server-side implementation of JavaScript.

The coding of KingTrans required a total of about 18-20 hours of work divided into several days: it was necessary to consider the various models of data presentation (see Figure 2 and 3), but it brought great benefit in the end. In fact, with this program, it took only a few seconds (from about 1 to 7) to recreate the translation files of the game with the Italian translation. The code of the game could then be uploaded again in the server and be immediately usable by the students. This operation can be performed by the teacher without using much of his/her time.[10]

5 Analysis of In-Game Translations

By allowing students to play the game they translated themselves, they were able to see some of the problems that can often arise when dealing with this type of media and thus become more aware of them.

§§ 5.1, 5.2 and 5.3 represent patterns already highlighted in the academic literature (Dunne 2006; O'Hagan, Hevia Mangiron 2013; Esqueda 2020). § 5.5 deals with technical problems that arose in the compilation of translations in the game code, while § 5.6 reports some significant instances of student reflections on defining terminology.

5.1 Text Too Large for the Interface

The most common problem encountered was precisely the length of the translated text, which was too long for the available space. In this case, it was not possible to determine the maximum number of characters available, nor to calculate the maximum number of Latin characters, just by looking at the original Japanese version; this because 1) the font is different and 2) the characters are not monospace and therefore have a different size (W, X, Y take up more space than

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9 JSON is the acronym of JavaScript Object Notation and is a format suitable for data interchange between client/server. For further information please consult the official ECMA-404 JSON page: `https://json.org`.

10 Coding skills are clearly needed to perform this operation, but I plan to share online the necessary code and instructions for installing KingTrans in the next future, so that this teaching activity can be replicated without the need for special digital skills.

i, l, a). The following screenshots below show some of these problems that occurred in the first revision of the translation.
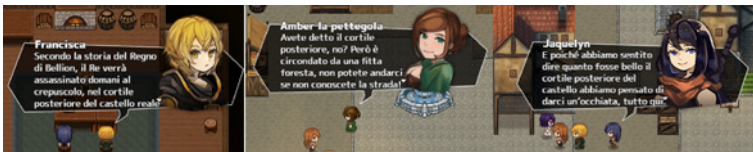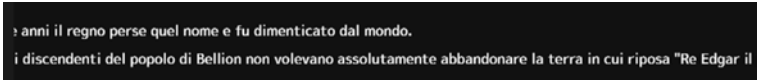

Figure 4   Rev. 1. Game Introduction 1. Off-screen text

Figure 5   Rev. 1. Game Introduction 2. Off-screen text

Figure 6   Rev. 1 Text fills the balloon too much or pops out from the assigned area

For the introductory text **[figs 4-5]**, since the system does not allow the 'automatic carriage return', it is necessary to divide the text into several lines based approximately on the result obtained from the first revision. For the text inside the balloons, it is necessary to revise and shorten the text, even if this may mean moving away from the original Japanese text **[fig. 6]**.

After analysing the translations from the first review by playing the game directly and projecting it in class, the students revised the translations as shown in figure 7 **[fig. 7]**.
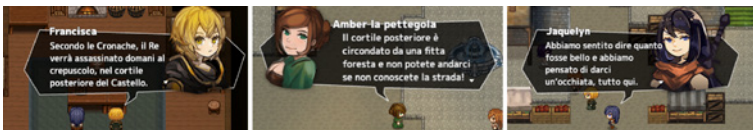

Figure 7   Rev. 2. The texts of Figure 6 have been revised and shortened

In the case of the first image, the changed part refers to the text: "Secondo la storia del regno di Bellion" (according to the history of the kingdom of Bellion), which becomes: "Secondo le cronache" (according to the chronicles). In this case, the students considered that making the name of the kingdom explicit again was not necessary from the point of view of the player, who has already received enough information in the inn. Moreover, compared to "storia" (history), "cro-

nache" (chronicles) is certainly a more appropriate term. Indeed, the Treccani online Italian dictionary (https://www.treccani.it/) defines "cronaca" (chronicle) as: "Narrazione di fatti esposti secondo la narrazione cronologica (senza alcun tentativo di interpretazione o di critica degli avvenimenti)" (Narration of facts set forth according to chronological narrative without any attempt at interpretation or criticism of events). The term "Castello Reale" (Royal Castle) was also changed: the adjective "royal" was actually removed. However, to clarify that both "Cronache" (Chronicles) and "Castello" (Castle) indicate "the official Chronicles" and "this specific castle", i.e. the Royal one, both terms have been capitalised.

In the case of the text of the second image – "Avete detto il cortile posteriore, no? Però è circondato da una fitta foresta e non potete andarci se non conoscete la strada!" (You said the back courtyard, right? It's surrounded by dense forest, though, and you can't go there if you don't know the way!) – the students realised, by playing the game, that the first part: "Avete detto il cortile posteriore, no?" (You said the back courtyard, right?) was not necessary for the player, so this part was deleted.

Similarly, the text of the third image was simplified by deleting the causal proposition: "E poiché abbiamo sentito dire quanto…" (Since we heard how much…), making the text more fluid.

A problem with texts being too long also occurred with the translations of the map texts. In the case of the figure below, the Italian exceeded the dedicated area because the system does not automatically enlarge it or set automatic line breaks **[fig. 8]**. Therefore, even in this case, it is necessary to evaluate which part of the text is most needed by the player. The original Japanese text is formed by 2 *kanji* compounds: the first one *ōjō* 王城 means 'Royal Castle', while the second one *uraniwa* 裏庭 means 'back courtyard'. Even in this case, playing the game makes it clear that the information the player needs most is 'back courtyard', and so the text has been retranslated into Italian accordingly.

Figure 8 First map of the game. Japanese, Italian (rev. 1), Italian (rev. 2)

As can be seen, the cases shown in figure 6-8 require gaming and decision-making skills to operate an optimal translation for the player. This type of activity is recognised in studies of game translation.

Frasca (1999), for example, argues that for the textual analysis of the video game it is necessary to associate elements typical of narratology with elements of ludology, intended as the analysis of the media as an element that makes the player play and feel pleasure. The player therefore becomes the centre of the investigation, and, as O'Hagan and Mangiron suggest, this reminds researchers:

> of the ultimate purpose of video games as a pleasure-giving medium. This, in turn, constitutes *skopos* in the context of translation and is something that the games localizer needs to bear in mind, as the raison d'être of the end product [...] With games localization, the translator is expected to convey a game play experience that is as close as possible to the equivalent of the original. (O'Hagan, Hevia Mangiron 2013, 4)

5.2 Grammatically Correct Translation, but not Suitable for the Context

As mentioned earlier, the translation strings are provided in Google Sheets, with no need to follow the order of the story. As Bushouse writes, "translators suffer from a lot of contextual issues. When the text is fragmented and scattered, scenes or dialogue may appear out of order, destroying the narrative context, and text files themselves may be poorly organized" (Bushouse 2015, 17).

The first two Japanese dialogues of this game report:

> Ann   *ja, minna, aratamete yoroshiku* じゃ、みんな、あらためてよろしく (a).
> Jackline   *yoroshiku ne, Ann* よろしくね、アン (b).

The first translation for (a) was: "Beh, ragazze piacere di conoscervi" (Well, girls, nice to meet you).

The problem to solve is related to the term *yoroshiku* よろしく, for which, for example, the online Cambridge dictionary gives as its first translation "nice to meet you". However, it is sufficient to consult other online dictionaries such as `https://jisho.org` or `https://a4edu.unive.it`[11] to understand how the semantic range of the term extends to meanings such as 'good', 'greetings', 'goodwill'. In the case of *Unsung Kingdom*, by reading the introductory text of the game, the player learns that the characters (who already knew each other) travel together to the past to prevent the assassination of the king. The presence of *aratamete* あらためて (again) per-

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[11] Mantelli, A.; Mariotti, M. (2016). *a4Edu, dizionario online giapponese-italiano*. `https://a4edu.unive.it`.

haps might have suggested that the most appropriate translation for the context is not 'Nice to meet you'. But it is especially the third dialogue that might make the translator understand that *yoroshiku* よろしく needs to be translated differently in this case. In fact, the dialogue reads like this:

> Francisca   *An ga shikiru no? Fuan nan da kedo* アンが仕切るの?不安なんだけど (Is Ann in charge? I'm a little worried…).

This makes it clear that the characters already know each other, so it makes no sense for them to introduce themselves.

So, after revising with the students, a translation came out that, although far from the original, better conveys the idea of the characters having just arrived: "Ok ragazze, eccoci qua" (Ok girls, here we are).

Figure 9   Mod. 1. Japanese text, first Italian translation and revised translation

Similarly, the second dialogue, "*Yoroshiku ne An* よろしくね、アン", was translated as "Piacere, An" (Nice to meet you, Ann), in accordance with the previous Italian dialogue. In this case, too, when the students understood the context of the usage, they were able to change the translation according to the story: "Mi raccomando Ann!" (Be careful, Ann!).

Figure 10   Dialogue 2. Japanese text, first Italian translation and final translation

In the following dialogue, the characters complain that they have not yet discovered the identity of the King's slayer. The Japanese text uses the expression *wakarazujimai* 分からずじまい. The https://word-dictionary.jp/ site (first Google result for this Japanese expression) reports the following explanation: *nariyuki ya ketsumatsu nado ga wakaranai mama de owatte shimatta koto* 成り行きや結末などが分からないままで終わってしまったこと, meaning 'something that is finished without knowing the end, etc.'. So, the proposed translation, "In fondo è finita senza che scoprissimo la sua vera identità" (Basically, it ended

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without us finding out his true identity) is not grammatically incorrect. However, this "è finita" (it is ended) is misleading for the player. Since this dialogue occurs in the first chapter and there was only one battle, which automatically ends with the defeat of the characters, it is difficult for the player to understand just what is ended. Therefore, also in this case, the sentence was simplified and made more concise: "In fondo non abbiamo nemmeno scoperto la sua vera identità" (After all, we haven't even discovered his true identity) **[fig. 11]**.

Figure 11   Japanese text, first Italian translation and final translation

5.3   Message Styles and Variable Management

The text styles in *Unsung Kingdom* are quite diverse. There are full-screen texts (for example, for the game's introduction and each chapter), texts in dialogue areas, texts in the personal menu, texts above enemies and weapons, and texts in small boxes for selecting answers. Answer selection boxes appear frequently in *Unsung Kingdom*, even though selecting an option changes the dialogue between characters for only a few lines. When the translation was first revised, all sentences in the answer selection text were followed by a period. It is common practice to end a sentence with a period, but the best practice guidelines for user interfaces recommend avoiding the use of punctuation in dialogue and choice selection boxes (The Mattermost staff 2020; The Qt Company 2020; Microsoft 2018), and indeed the presence of the period in the selection boxes is quite disturbing, as shown in figure 12 **[fig. 12]**.

Figure 12   Selection box text with a period at the end in the first revision on the left, and without, in the second revision on the right

Precisely because it was possible to check the translation through the game, the students realised that the selection text needed to be

revised in terms of punctuation, and they eliminated the last period in the second revision.

Another skill required for video game translation is text variable management. There are texts with markers that represent the variables of the game and these must be maintained. Also, the spacing between markers needs to be taken care of so as not to run into the problem shown in the Figure 13. The task shown in this figure is to find 5 little puppies in the forest. Each time one is found, the owner of the dogs tells us how many are missing. Figure 14 dialogue says: "There should be 4 puppies left. Thank you for your help." In the first version, not only is the space after the period ignored, but the spaces around the numeral are missing. The original Japanese is *Ato #{count}hiki iru hazu nanda* あと#{count} 匹いるはずなんだ。(there should be #{count} puppies left), but since Japanese does not have spaces, the problem only occurs in translation.

Moreover, the system also links the next script sentence to the same dialogue and thus the translator cannot understand that these two sentences are linked unless he has played the game at least once. Therefore, to solve this problem, it is necessary to insert a space either at the end of the first sentence or at the beginning of the second sentence. The following figure, which shows the affected part of the text, clarifies the problem [fig. 13].

26	started[1]		
27		ありがとう！ // hunter	Grazie!
28		あと#{count}匹いるはずなんだ。 // hunter	Dovrebbero esserci ancora#{count}cuccioli.
29		よろしく頼んだよ。 // hunter	Grazie per l'aiuto.

Figure 13   Line 28, yellow area, the spaces between #{count} are missing.
The text in line 29 is automatically inserted into the same dialogue without the translator noticing.
Adding a space after the end of line 28 solves the problem

This case is therefore an example of how translators can suffer from contextual problems, since the text is divided into fragments that do not necessarily represent the dialogue as a whole (see § 5.2).
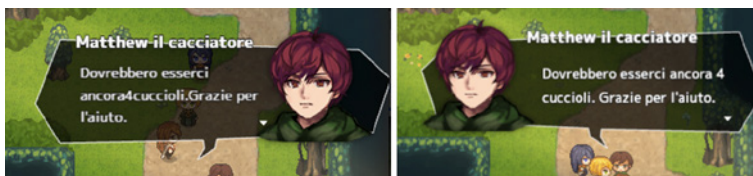

Figure 14   Image on the left before students' revision. Image on the right, after revision

After checking the translation in the game, students were able to correct the text appropriately, as shown in figure 14 [fig. 14].

5.4   Non-Linear Dialogues

Unsung Kingdom also contains several non-linear dialogues, i.e. dialogues that (as indicated in the introduction) do not appear in order sequence, but rather whenever the player approaches a character in the story. I expected that students would have difficulty translating these texts, which do not follow a sequential line. However, this type of text did not represent a problem. The translations of these dialogues have been consistent with the game since the first revision, except for a few cases of texts that were too long and needed to be revised, as mentioned in § 5.1.

5.5   KingParse Errors[12]

The prototype created to convert the translations in the Google Sheet into the translation code for the game (KingParse) was not entirely free of problems. However, testing with the students allowed me to identify the problems and fix them for later release. The translation activity of the game with the students took place up to Chapter 2, and although all patterns of hierarchical organisation of the text were covered, the presence of some other bugs could not be excluded. The bugs found and fixed were related to the handling of text a) in some answer selection boxes, b) in some dialogue boxes, and c) in enemy names [fig. 15].
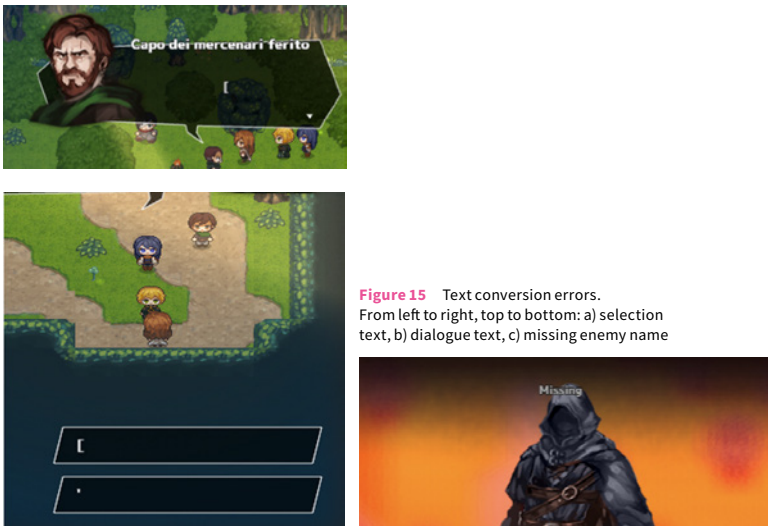
Figure 15   Text conversion errors.
From left to right, top to bottom: a) selection text, b) dialogue text, c) missing enemy name

12   As stated at the beginning of this chapter, this paragraph describes technical problems that are not related to the students' behaviour but anyway relevant to this project workflow.

5.6 Terminology

Establishing appropriate terminology for the game is an activity that required the formation of a special working group. The students in this group were primarily responsible for translating system messages, introductions, and all text related to weapons, spells, clothing, and the names of all characters.

For this activity, I created a separate Google Sheets file where students had to note the rationale for the stylistic choices made. Below are some of the students' comments. As can be seen from the table, the translation was done after appropriate research and consideration by the students, namely:
a. adequate research on the punctuation to be used (1);
b. careful observation of the game environment (2, 3, 4);
c. research on standard terminology or terminology already used in different games (5);
d. evaluation of the spaces available for translation and research of terms with greater impact (6, 7).

Table 1 Students' terminology comments

No.	Japanese	Italian translation	Students' annotations in Italian, translated into English
1	平和王エドガー	Edgar il pacifico (Edgar the Peaceful)	After further discussion, we thought it was graphically more palatable to keep "king" (lowercase *k*) when followed by the name (e.g. king Edgar), while "King" (uppercase *K*) when referring to the specific person, and not just the office (e.g. "The King [intended King Edgar] killed the dragon a thousand years ago," but "the king is the legitimate and recognised head of a state governed by monarchy") → following the guidelines in the following article: `https://dizionari.corriere.it/dizionario-si-dice/M/maiuscole-minuscole.shtml`.
2	聖アンテルスの墓地	Catacombe di Sant'Anters (Catacombs of Saint Anters)	On the game map, the location is marked as "Catacombs of St. Anters". Also, searching for images of the dungeon on Google, one will see that they are mostly images of the interiors. The first translation was "cemetery", then it was changed to catacombs to refer to the graphic theme of the game (in which catacombs are to be seen).

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No.	Japanese	Italian translation	Students' annotations in Italian, translated into English
3	裏庭	Cortile posteriore (back courtyard)	Given the configuration of the place, we opted for the translation "cortile posteriore" (back courtyard) instead of "giardino" (garden) which instead gives more of an idea of something majestic, and to explicit the word "posteriore" (back) that can be elided in cases where the sentence does not fit in the balloon. We saw what the play space looked like and didn't feel like calling it a garden.
4	王城	Castello Reale (Royal Castle)	We opted to leave Castello Reale (Royal Castle) as the name of the area on the map, but to use only "Castle" in conversations to save space with the characters (also because there should be only one castle, so you don't need to specify that it's the royal one).
5	推奨レベル	Livello consigliato (recommended level)	We preferred "livello consigliato" over "livello raccomandato" because the term "consigliato" is shorter and has already been used in official translations, such as the one of Fire Emblem Three Houses.
6	竜殺しの (王)	Ammazzadraghi (DragonSlayer)	We chose the translation: "Ammazzadraghi" (DragonSlayer) because it is shorter and has a greater impact than "Uccisore di Draghi" (Dragon Slayer)[*]
7	時間水晶	Cronocristallo (Chronocrystal)	We chose the translation: "Chronocrystal" instead of the more literal 'Time Crystal'

[*] Both "Ammazzadraghi" and "Uccisore di draghi" can be translated in English as 'Dragon Slayer', so to explicit the difference in English I wrote "DragonSlayer" (without space) and "Dragon Slayer" (with space).

The notes also refer to some standard guidelines that students may wish to use in the context of punctuation or a particular text structure in the game, for example:

> We keep character names in English because they are presented as images in several parts of the game. The current configuration of the system and our translation group does not allow us to change them.

> After ellipses, the lower case (see Zanichelli and Treccani).

There are also many references from students regarding the change of terminology under the new guidelines, a sign that the activities of the group working on the definition of terminology have been taken into account, for example:

> I have changed 'Royal Castle Gardens' to 'Royal Castle Back Courtyard'. (See 'Guidelines and Reports > Terms').

6   Survey

In order to ascertain the status of student satisfaction with *Unsung Kingdom*'s translation activities, I conducted a survey at the end of the course, to which 23 students who participated in the translation project agreed to answer.

The survey questions are of 5 different types, as reported in the following table.

Table 2   Survey. Type of questions

Description	Type Code
5-point Likert (rating) scale from 1 to 5 (1=Very Dissatisfied, 2=Dissatisfied, 3=Neutral, 4=Satisfied, 5=Very Satisfied)	5-P
Yes or No selection	Y-N
Single selection	Single
Multiple selection	Multi
Open answer	Free

The purpose of the survey was to understand:
1. Was the translation activity enjoyable and stimulating? Questions: 1-3.
2. Was the translation activity formative in terms of learning linguistic, grammatical and translation skills? Questions: 4-5.
3. Did the translation activity help to understand the difficulties of translating video games? Questions 6, 9.
4. Was the game selected suitable for translation into Italian? Question 13.
5. Was the work protocol adopted considered user-friendly and appropriate for the assigned work? Question 14.

Regarding the 5 points above, the following conclusions can be drawn from the survey results presented in the table below.
1. The game translation activity was largely appreciated and motivating, with a satisfaction level of 86.9% (sum of points 4=satisfied and 5=very satisfied). 43.5% had never engaged in video game translation before, but the activity was generally perceived as more motivating than traditional classroom activities (overall satisfaction = 91.3%).
2. In terms of language learning, only 39.1% felt they had acquired new skills. However, 78% believe they have improved their translation skills from Japanese to Italian.
3. From questions 6 and 9, it is clear that the main problems that students had while testing their translations in the game

were: a) the problem of translations being too long compared to the limits of the system, b) the fact that their translations, even if correct, were not appropriate to the story, and c) the need for philological research on terminology. These issues were discussed in detail in chapter 5. Reflection on these points led in some cases to further reflection on the work of translating video games (question 8, 65.2%) and to a greater interest in this area of work (question 11: 39% said they were not interested before but are now). This means also that not only students who were interested in video game translation from the beginning found this activity positive, but also a good percentage of those who had no particular interest found it motivating.

4. 86.9% were satisfied with the game selected for Italian translation, i.e. *Unsung Kingdom*.
5. 78.3% were satisfied with the protocol adopted for the translation activity.

Table 3 Survey details

No.	Question	TypeCode		Answers		
1	Did you enjoy translating *Unsung Kingdom*?	5-P	Y	Points	Ans. num.	Perc
				1	0	0%
				2	1	4.3%
				3	2	8.7%
				4	7	30.4%
				5	13	56.5%
2	Before starting the *Unsung Kingdom* translation experience, were you interested in such a learning activity?	Y-N	Y	Yes	No	
				56.5%	43.5%	
3	Did the goal of localizing *Unsung Kingdom* in Italian and being able to play it motivate you more in translating texts than traditional teaching methods?	5-P	Y	Points	Ans. num.	Perc.
				1	0	0
				2	1	4.3%
				3	1	4.3%
				4	9	39.1%
				5	12	52.2%
4	Did the *Unsung Kingdom* localisation activity allow you to improve your Japanese (grammar/vocabulary/*kanji*)?	5-P	Y	Points	Ans. num.	Perc.
				1	0	0%
				2	6	26.1%
				3	8	34.8%
				4	6	26.1%
				5	3	13%

No.	Question	TypeCode		Answers		
5	Has *Unsung Kingdom*'s localisation activity allowed you to improve your Japanese to Italian translation skills?	5-P	Y	Points	Ans. num.	Perc.
				1	0	0%
				2	1	4.3%
				3	4	17.4%
				4	9	39.1%
				5	9	39.1%
6	When the texts you translated were transported into the game and you were able to play it, what kind of issues did you experience?	Multi	Y	Question	Ans. num.	Perc.
				Translations too long	15	65.2%
				Wrong translations	4	17.4%
				Formally correct translations, but not in line with the story	14	60.9%
				Formally correct translations, but not usable for technical reasons or not consistent with the images	3	13%
				Other	2	8.7%
7	Did you find any peculiarities/ curiosities in the Japanese dialogues of the game? If so, can you briefly describe which ones?	Open	N	4 answers		
8	Has *Unsung Kingdom*'s translation work prompted you to think in general about the work of localizing video games from Japanese and related issues?	5-p	Y	Point	Ans. num.	Perc.
				1	0	0%
				2	0	0%
				3	0	0%
				4	8	34.8%
				5	15	65.2%

Question 7 answers:

- The greatest difficulty was in the rendering of registers (from more colloquial to more formal), or in the rendering of various expressions such as *ne* ね final, *sōka* そうか and others that in Italian risked being redundant.
- The peculiarity was to think, initially, of the target for which the game was designed, to be able to calibrate the formality (or informality) of the dialogues. Moreover, it was interesting to be able to have visual feedback of what was being translated: it was not a prose text but dialogues (most of the time) between different characters, to be characterised with their own language (even if in a light way), and to which to adapt the right syntax etc. (e.g. gender and number of the verb, which without a context in Japanese is difficult to translate).
- Each character has a unique way of expressing himself. Since we only have an image of the characters, we try to make the player understand the character not only through the name itself but also through the way they express themselves.
- Adapting words from the fantasy world into Japanese/ Katakana.

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No.	Question	TypeCode		Answers		
9	According to your experience, what have been the biggest issues in this translation activity?	Multi	Y	Question	Ans. num.	Perc.
				No particular issues	0	0%
				Translations, while correct, may not be adequate to the story	19	826%
				Technical limitations	7	30.4%
				Space limitations	8	34.8%
				You need to follow a translation and implementation protocol	2	8.7%
				You need technical IT skills	7	30.4%
				A philological analysis of terminology (places, weapons, characters, enemies) is necessary	9	39.1%
				You need gaming skills	6	26.1%
				Before starting to translate, it is necessary to define a glossary of the game terminology	1	4.3%
				It takes a lot of time because you also need to play the game	1	4.3%
10	Do you have any additional comments or thoughts (positive or negative) about the localisation effort/differences found with traditional translation?	Open	N	7 answers		

For question 10:

- Please run it again next year. Translating academic articles, newspaper articles, or novels may not be as much fun as translating the texts of a game.
- It was a more immersive translation experience than traditional translation and it provides a different kind of satisfaction when you can see your translation within the game.
- The good thing is that you focus more on 'getting into the characters'. Besides, you translate mostly spoken expressions, as opposed to a novel where you might find more descriptive parts.
- In order to make the translation as consistent as possible, it was necessary to complete the game while taking notes. Collaboration was a bit complex due to the pandemic phase taking place during the course; it would have been a lot of fun to participate as a workshop.
- When you translate a video game, with dialogues and an alternative world, it is difficult to agree on the style to give (in a coherent and continuous way) to the translation, even if the translations are correct. Even more so when there are space constraints.
- For the first time, we translated something that we usually don't even come into contact with. Only on one occasion have I translated pages in manga style (it was a news story reported in graphic form).
- It was interesting to try something new, to open a door to an interest that we may not have even known we had before.

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No.	Question	Type	Code	Answers		
11	After this educational experience, would you like to work in the field of video game localisation?	Single	Y	Questions	Ans. num.	Perc.
				Yes, I wasn't interested before, but after this experience I am interested.	9	39.1%
				No, I wasn't interested in it and I'm not interested in it now.	2	8.7%
				Yes, I was interested before, and I am interested now.	11	47.8%
				No, I was interested before, but after this experience I am less interested/ not at all.	0	0%
				None of the above answers	1	4.3%
12	Can you give further reasons for the previous choice?	Open	N	10 answers		

For question 12, the answers are:

- This is an area that would allow me to challenge myself by doing work that allows me to pursue one of my passions.
- I would like to become a video game translator.
- I haven't been playing for several years now and I hadn't considered it as a possible career, but I've started to find it interesting, also because it would allow me to acquire computer skills that I was already passionate about at the time of my three-year degree.
- I think it could be a fun job that combines my passion for Japanese with the video game experience, which is always a pleasure and reminds me of my childhood.
- I've always thought about what it would be like for me to work in the video game industry, and now that I've experienced it, I'm convinced that it could be a suitable profession for me.
- I had never considered it as a possible future job, but I enjoyed working as part of a team and on a text that had different characteristics (as compared to prose pieces, for example) that I was not used to. This would not be my first career choice, but after this experience I think it could be a very fun and satisfying job.
- I've always been interested in the world of translation, especially in the video game field. If the opportunity comes up again in the future, I would be very happy to participate again.
- I found it to be a more dynamic and interesting translation activity than translating traditional texts; you must concentrate on the dialogues and the bulk of the work is figuring out how to render the Japanese (short but full of information) into Italian (which tends to use more complex paraphrases). It's an interesting process, and I found it even more satisfying than translating traditional texts.

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No.	Question	TypeCode		Answers		
				• I'm relatively interested in it, as a side job for example. From what I know, it's quite difficult to find a satisfying job and, above all, one that allows steady economic support in that field. • I had never thought about the possibility of translating video games, although I am a moderate user of them. With this experience, I've had the opportunity to learn not only the dynamics of translation, but also those related to organisation and teamwork in order to achieve a cohesive work.		
13	In your opinion, was *Unsung Kingdom* an adequate game to be translated into Italian?	5-P	Y	Questions	Ans. num.	Perc.
				1	0	0%
				2	0	0%
				3	3	13%
				4	7	30.4%
				5	13	56.5%
14	How do you evaluate the working protocol adopted? Namely: use of Google Sheets for translations; structuring of sheets for inserting texts in Italian; creation of working groups; weekly import of new translations into the game. Review and alignment of formal elements (king vs King, Edgar vs Edgard, terminology).	5-P	Y	Questions	Ans. num.	Perc.
				1	0	0%
				2	0	0%
				3	5	21.7%
				4	8	34.8%
				5	10	43.5%

7 Conclusions

The process of instructional design for the translation activity was influenced by the need to minimise the development time for technical solutions on the one hand, and the transfer phases of the translated text within the game on the other. For this reason, the protocol I designed a) uses Google Sheets instead of a dedicated insertion panel that would require significant development time, and b) uses dedicated Google APIs to automate the work of inserting translations into the game. Therefore, this work protocol would be optimal in classroom situations where the teacher's time is usually limited.

The survey showed a high level of student interest in the project and an awareness of the problematic patterns of video game translation.

The target video game in this case, in addition to being an RPG and typically containing a lot of text, also had a very low learning curve, thus allowing unhindered focus on the analysis of the translated text, especially in the first part. Moreover, the presence of the war elements of role-playing games (weapons, spells, monsters, en-

emies) required an in-class thorough analysis of terminology and a notable ability to invent short and appealing terms.

The protocol presented in this article can also be replicated for the translation of other games and languages other than Japanese and can be used in other educational situations due to its low cost. *Unsung Kingdom*'s code is released under the MIT license, so it can be modified and redistributed, and is freely downloadable. Google Sheets and its API can also be used for free. The only technical investment concerns the system for converting the translated text into the game code, but, once created, it can be reused for other projects. As reported, the educational benefit that students derive from the translation and testing activity is relevant in terms of motivation to use the Japanese language in practice and acquired awareness of the peculiarities of the video game medium.

However, it is necessary to improve the organisation of the translation protocol. In class, especially at the beginning, there were often misunderstandings about the parts to be translated and the guidelines were not followed in some cases. The system for implementing texts in the game (KingParse) also needs to be improved because, as mentioned in 5.5, it is not yet free of errors. Although the results are encouraging, it is necessary to repeat the experiment with other classes to verify and consolidate the validity of the process and the results.

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