

## Audio description translation from Spanish into Chinese as an alternative to creating audio description: A reception study

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### Abstract

This article presents a reception study with Chinese audio description (AD) users to investigate the feasibility of AD translation by having them evaluate three AD versions for the Spanish movie *The Invisible Guest* (Paulo, 2017): one created from scratch in Chinese, another translated from the Spanish AD script, and a third translated from the Spanish script and localised into Chinese. A questionnaire including questions on demographic information, comprehension, presence, and overall satisfaction with quality was used to measure participants' viewing experience. Some participants also offered personal feedback after AD viewing. The results show that the Chinese AD received the highest mean score, followed by the Localised AD and the Translated AD, although a statistically significant difference is only observed between the Chinese AD and the Translated AD. Furthermore, there is no relevant difference between the three AD versions regarding comprehension or presence. Consequently, it can be claimed that AD translation may be an alternative for creating AD in Chinese, and localisation can potentially give greater user satisfaction overall compared to literal translation.

### Keywords

audio description translation, Spanish-Chinese, presence, localisation, reception study

## 1. Introduction

One of the main obstacles facing audio description (AD) in China is copyright infringement due to the lack of legal guarantees, which do not explicitly include the fair use of AD products. Consequently, it has not been easy to get permission from the copyright holder of the original audiovisual work to create and disseminate AD since its start as a volunteer-dependent service around 2005 (Tor-Carroggio & Casas-Tost, 2020). However, in 2021, Chinese AD stakeholders were finally able to welcome two legal initiatives concerning this issue. The first concerns the decision to observe the Marrakesh VIP Treaty (MVT) (WIPO, 2013), which is a treaty on copyright aimed at facilitating access to works for persons with partial or total sight loss or other print disabilities. As a consequence of this, the Copyright Law of the People's Republic of China (中华人民共和国著作权法, *Zhonghua Renmin Gongheguo Zhuzuo Quanfa*) has recently been amended to add a new exemption for providing accessible formats of published works, including audio-visual products, for people with print disabilities (articles 3 & 24)<sup>1</sup>. This modification came into force on June 1, 2021. In addition, China, which had already signed the MVT as a contracting party in 2013, officially ratified this treaty on October 23, 2021, through the National People's Congress of the People's Republic of China<sup>23</sup>. These two Chinese legislations should play a key role in providing a more adequate legal framework for AD standardisation in China. Nonetheless, the scarcity of qualified AD script writers is a potential hindrance to Chinese AD with the anticipated increase in legally required AD (Tor-Carroggio & Casas-Tost, 2020).

Given this context, translating AD scripts, in our case from Spanish into Chinese, was considered an alternative to creating a new AD from scratch. The expected advantages are to increase the number and variety of AD products, speed up production time, reduce costs, and possibly improve AD quality in China by introducing some Western expertise. It was assumed that if this method proves valid for this language pair, it could be applicable to other language combinations as well. However, the need to draft localisation guidelines may arise for translating AD since AD methodologies may vary between languages according to previous research on AD translation (Jankowska *et al.*, 2017; López Vera, 2006; Remael & Vercauteren, 2010), studies contrasting ADs in different languages (Arma, 2012; Bourne & Jiménez-Hurtado, 2007; Limbach, 2012; Matamala & Rami, 2009; Sanz-Moreno, 2017), and our preliminary findings comparing Chinese and Spanish ADs (Liu & Tor-Carroggio, 2022a, 2022b; Liu *et al.*, 2022).

Based on a user-centred approach, this article presents a reception study with Chinese AD users to investigate the feasibility of our proposal by testing with them three AD versions for the Spanish movie *The Invisible Guest* (Paulo, 2017): one created from scratch in Chinese (henceforth Chinese AD), another translated from the Spanish AD script (Translated AD), and a third translated from the Spanish script and localised into Chinese (Localised AD) based on AD approaches in Chinese. Our research question is whether the three versions will make a relevant difference for the users' viewing experience in terms of comprehension, presence, and overall satisfaction. Our hypothesis is that the Chinese AD will be the best received, followed by the Localised AD and the Translated AD.

This article is divided into five sections: first, a review of previous research related to this subject; second, an explanation of the methodology used in our reception study; third, a detailed review of the results obtained; fourth, discussion on the comments provided by some participants; and finally, conclusions including the limitations of this study and possible avenues for future research.

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<sup>1</sup> <https://flk.npc.gov.cn/detail2.html?ZmY4MDgwODE3NTJiN2Q0MzAxNzVlNDc2NmJhYjE1NTc%3D>

<sup>2</sup> <http://www.npc.gov.cn/npc/c30834/202110/24c0f011644542da879c78e8654cc9b8.shtml>

<sup>3</sup> This ratification decision applies to Mainland China and Hong Kong but not Macau.

## 2. AD translation and AD reception research: An overview

As one of the most contentious topics in accessibility research, AD translation has been studied by some scholars as a viable cost and time-saving strategy for creating AD, given that the increasing demand for AD products has been considerably stimulated by legislation, with the Convention on the Rights of Persons with Disabilities adopted on December 13, 2006, as a turning point. López Vera (2006) was the first to experiment with the proposal of AD translation. His tentative results suggested AD translation could be more accurate, faster and cheaper than creating AD from scratch. Remael and Vercauteren (2010) compared the AD scripts translated into Dutch and the English originals for two movies. They viewed AD translation as a logical option for countries relatively new to AD because they usually import many foreign audiovisual products and have enough professional audiovisual translators of their own. Furthermore, when focusing on the translation of a specific grammar point or of cultural references, they asserted that AD translation poses problems common to AVT as well as others more specific to AD. Jankowska *et al.* (2017) explored the possibility of translating AD scripts into English created locally for non-English-language films. Based on a case study, they looked into the possible strategies for rendering cultural references in AD translation. In line with López Vera (2006) and Remael and Vercauteren (2010), one of their conclusions was that AD translation can avoid a significant loss of necessary cultural references since the original AD originating from the same culture as the movie gives the appropriate cultural background. Finally, Jankowska (2015) conducted a small-scale reception study to test the acceptance of AD translation from English into Polish after demonstrating that it was less time-consuming and more cost-effective. She found that the visually impaired participants in her study preferred translated AD scripts to original ADs more often than sighted people. Nevertheless, she acknowledged that her study sample was too small—only sixteen valid questionnaires from visually impaired children aged 12-18, and that further research with a larger and more diverse sample group was needed to confirm her results.

Inspired by other fields like communication studies, sociology and psychology, reception research has been increasing in AD studies, taking the user-centred approach advocated by many scholars (Greco, 2018, 2019; Greco & Jankowska, 2019). Two common methodological difficulties often encountered are the diversity of the audience and the transversal or multidisciplinary nature of audience research (Di Giovanni, 2020). Hence, most of these reception studies tend to be small-scale and exploratory. The researched topics range from different AD methods to the impact of AD on the visually impaired or the sighted to explore AD's benefits for them and the feasibility of mixing persons with and without sight loss to gain a similar viewing experience (Perego, 2016). In the case of AD methods, most studies have focused on AD script writing, such as the use of first-person narrative (Fels *et al.*, 2006), or a more subjective and narrative style including cinematic terms or subjective descriptions (Bardini, 2017, 2020; Fryer & Freeman, 2012, 2013, 2014; Fryer & Walczak, 2017; Ramos, 2013, 2016; Walczak, 2017). Others have dealt with AD delivery, such as the use of synthetic voices (Fryer & Freeman, 2014; Szarkowska, 2011; Szarkowska & Jankowska, 2012; Tor-Carroggio, 2020b; Walczak, 2017) or AD prosody (Iglesias Fernández *et al.*, 2011; Machuca *et al.*, 2020). All these studies acknowledge the diversity and heterogeneity of people with sight loss and the need for customization, leading to accepting new AD creation alternatives, such as text-to-speech AD and AD translation, or more varied AD styles that allow for more subjectivity in contrast to the objectivity principle required by existing AD guidelines.

Regarding research design in reception studies, mixed methods and tools are preferred (Di Giovanni, 2020) and questionnaires are the most widely applied research tool for data collection in reception studies about AD and AVT in general. Apart from the demographic

information, the phenomena primarily addressed can be roughly divided into four groups: comprehension, preference—the two aspects were included in almost all the studies, presence (Fels *et al.*, 2006; Fryer & Freeman, 2012, 2013, 2014; Fryer & Walczak, 2017), and emotion elicitation, often linked with presence (Bardini, 2017, 2020; Fryer, 2013; Fryer & Freeman, 2014; Fryer & Walczak, 2017; Ramos, 2013, 2015, 2016).

However, few reception studies have been done in the Chinese context, except for two PhD dissertations: Leung (2018) conducted a reception study in Hong Kong to gauge users' preferences for different AD strategies on some specific issues like film language, while Tor-Carroggio (2020b) tested text-to-speech AD with users in Shanghai and found that the participants welcomed it as an interim alternative or even a permanent solution if it implied increasing the offer of AD products. Both scholars used questionnaires for data collection.

### 3. Methodology

This section explains the stimulus used and the questionnaire design for measuring users' viewing experience, and then explains how the experiment was developed. The study design was approved by the Ethics Committee of the Universitat Autònoma de Barcelona on 1 March, 2021 (Reference Number: 5458).

#### 3.1. Stimulus

##### 3.1.1. Film selection

Some previous reception studies on AD used short clips aiming to employ a within-subjects design, testing the users with different film genres or with various AD versions for the same clip without making the experiment too long and tiring for the users (Fernández-Torné & Matamala, 2015; Fresno *et al.*, 2014; Fryer & Walczak, 2017; Tor-Carroggio, 2020b). In contrast, Bardini (2020) used a complete short film with three AD versions instead of a feature film under a within-subjects design, possibly also to limit experiment time. Though using short audio clips in their reception study, Fresno *et al.* (2014) commented that their reception might differ from that of complete movies, and they encouraged the use of complete films for future studies. Therefore, in our reception study, it was decided to measure overall viewing experience with a full-length film to give people more time to get familiar with the different AD styles of each version. Another important reason was that some differences between Chinese and Spanish AD cannot be analysed using short clips. For example, Chinese AD tends to reveal certain key information at the beginning of a movie to create suspense, which is only unveiled at the end (Liu *et al.*, 2022).

Since Spanish and Chinese are our language pair, a Spanish film was considered ideal because its AD script in Spanish was assumed to reflect Spanish AD methods thoroughly. Although Tor-Carroggio (2020a) found out that historical films emerge as the genre of choice for Chinese AD users, a mystery thriller of about 100 minutes — *The Invisible Guest* (Paulo, 2017) — released in Mainland China in 2017 was finally chosen for three reasons. First, it is one of the most famous Spanish films in China, where the market for Spanish cinema is very limited. Second, it is not very culturally loaded so that the influence of cultural elements, which is not the main focus of this study, is kept to a minimum. Third, its AD in Spanish was produced under the Audesc system developed by ONCE, so the AD methods followed by this script will be consistent with our previous studies, where the Spanish AD scripts under analysis were created under the Audesc system (Liu *et al.*, 2022).

##### 3.1.2. Creation of the three AD versions

To create the three AD versions, the Spanish AD script was first purchased directly from the

script writer. An experienced Chinese AD script writer was then asked to create the Chinese version<sup>4</sup>, while a professional translator was hired for the Translated and Localised ADs. Since there are no professional Chinese translators with experience in AD, the translator was asked to undergo self-training using materials from the first two modules of ADLAB PRO<sup>5</sup>. She had to answer a series of multiple-choice questions to guarantee she was prepared for the task. Once she was considered to have a basic understanding of AD, she was sent the Spanish AD script to create the Translated AD, which was essentially a translation of the original Spanish AD script. After completing the Translated AD, the translator was sent our preliminary localisation guidelines in Chinese. However, her localised AD did not meet our expectations, possibly owing to her lack of experience in AD, so in light of this situation as well as because of time and budget constraints, the job was allocated to the author of this article who, although not a professional translator or an experienced AD script writer, had received theoretical training in both and is a native Chinese speaker.

The three persons involved in creating the AD versions were required to record the script writing time and once all three versions were available, a voice talent in China was hired for the recording and a technician for the sound mixing afterwards. Strictly speaking, both the Chinese AD scriptwriter and the voice talent are not AD professionals because they belong to an AD group formed by volunteers, most of whom are radio presenters. We decided not to hire a person to review the three AD versions to avoid homogenization.

As a result of the differences found between Chinese and Spanish AD (Liu *et al.*, 2022), the following two aspects were addressed in the localised version: a bigger information load, and a higher degree of script writer intervention, mainly referring to more explicitness-related information, subjective comments and cause-effect relationships. According to our analysis, the Chinese AD in our study took the longest time and is the most subjective; the Translated AD took the least time and is also the shortest and most objective; while the Localised AD took almost twice as long to carry out compared to the translated version, was the longest and reflected an intermediate degree of subjectivity compared with the other two versions. Table 1 shows the time for creating each version and their length.

AD version	Time	Length
Chinese AD	23 hours	9,361 Chinese characters
Translated AD	8 hours	6,759 Chinese characters
Localised AD	15 hours	9,663 Chinese characters

**Table 1.** Creation time and length of the three AD scripts

Although localisation took much longer than mere translation, both saved a significant amount of time compared to creating an AD in Chinese from scratch.

### 3.2. Questionnaire design

Building on the previous studies reviewed in section 2, we developed a questionnaire to measure the viewing experience of participants. It consisted of four blocks: demographic information, comprehension, presence and a final question on satisfaction with quality. We decided not to include *preference* as a parameter as it would possibly lead to inconclusive results depending on users' personal tastes and inclinations (Chmiel & Mazur, 2012; Mazur, 2020; Ramos, 2016).

<sup>4</sup> She has been in charge of AD script writing in an AD group in Shanghai since 2018.

<sup>5</sup> <https://www.adlabpro.eu/coursematerials/>

The demographic information included age, gender, education level, sight condition, age of sight loss and interest in having more foreign-language films. The last question was incorporated to find out if this could be a niche of opportunity for AD translation or localisation. For the comprehension section, five multiple-choice questions on some details or overall understanding of the film were included.

Regarding presence, a reduced version of the ITC-SOPI (Lessiter *et al.*, 2001), a questionnaire used to assess users' sense of presence experiences in virtual environments, was translated into Chinese and used in our study with copyright authorization from the authors. This cross-media presence questionnaire had already proved helpful for AD research by some scholars testing the entire experience of the AD user instead of the AD alone (Fryer & Freeman, 2012, 2013, 2014; Fryer & Walczak, 2017). The reasons for choosing a reduced version by extracting only 13 items from the original 44 were:

- To avoid fatigue for the audience with sight loss considering the ITC-SOPI questionnaire is not specific for this target group, and it may be more complex and tiring for them to answer all the questions after being exposed to a long movie;
- To encourage more informants to participate, because a very long questionnaire may discourage them from answering it after watching a full movie;
- The selected items were considered the most relevant for this study.

The short version of the questionnaire had four questions about Spatial Presence, five about Engagement, two about Ecological Validity and two about Negative Effect. As the ITC-SOPI is designed to be used in its entirety, it was necessary to analyse the reliability of our reduced version for the results to be valid. Internal reliability coefficients were computed for each of the four levels and the results of this analysis with the alpha threshold of 0.800 (Cronbach, 1951) are summarised in table 2:

	Negative effects	Engagement	Spatial presence	Ecological validity
Cronbach's $\alpha$	0.612	0.685	0.766	0.655

**Table 2.** Reliability of the four adapted scales of the ITC-SOPI

As they do not reach the minimum level of 0.8, these four groupings of items cannot be considered scales and, therefore, they will be treated separately and the results will be presented in a non-aggregated manner.

Together with the final question on satisfaction with quality, all fourteen questions originally used a 5-point Likert scale (1=strongly disagree; 5=strongly agree). Considering Tor-Carroggio's (2020b) claim that Chinese users have difficulty understanding numeric scales, the 1-5 scale was substituted for a categorical one (from strongly disagree to strongly agree). The full questionnaire consisted of 25 questions and took about 10 minutes to complete. After a pilot experiment conducted by the author in Shanghai on 20 June, 2021, modifications were incorporated into the wording of seven questions. Four questions were about demographic information and were modified to make participants feel more comfortable. The remaining three, related to presence, were reworded to improve comprehension by using more direct and accessible language.

### 3.3. Experiment

The experiment used an asynchronous online user-based testing design for its temporal and spatial flexibility (Oncins, 2021) allowing for the time difference between Spain and China since the field work period had finished and the researcher could not travel to China again to conduct another face-to-face experiment due to the COVID-19 pandemic. However, an online

setting turned out to be a good solution and helped reach a broader and more varied group of respondents in terms of sight characteristics, age and geographical origin. This benefit was also signalled by Mączyńska and Szarkowska (2011, cited in Chmiel & Mazur, 2012). One hundred and fifty-three participants were recruited through personal contacts and snowball sampling from July to October, 2021. They were randomly assigned to an AD version without being told the difference between the three ADs. The movie and the online questionnaire were shared with the participants individually. Blind participants were given the audio files, as this format was much easier to handle since the platform where we shared the video files was not sufficiently accessible for blind people. After listening to the AD, they answered the online questionnaire independently using the screen reader or orally via a voice call with the researcher. However, in the second case, the questionnaire could often not be administered right after the AD due to the time difference between China and Spain. Finally, we obtained three balanced groups for each AD version: 51 answers for each AD.

#### 4. Quantitative results

This section presents the quantitative analysis of the data collected, divided into four parts corresponding to the questionnaire design. The AD version will be examined to see if it has a statistically significant effect on the participants' viewing experience. The demographic variables will also be examined to see if they have affected the other three aspects—comprehension, presence, and satisfaction with quality. A (standard) 0.05 significance level has been established for all statistical tests.

##### 4.1. Sample characteristics

Table 3 presents the descriptive statistics for the two questions of an ordinal nature in the demographic information section of the questionnaire. Our study sample age is not very old with a mean of 44.9 years, and since the mean age of sight loss is 12.3 years old, it may suggest most participants have visual memory.

	Age	Age at which started to lose sight
N	153	150
Missing	0	3*
Mean	44.9	12.3
Median	45	5.00
Standard deviation	13.0	14.3
Minimum	18	0
Maximum	71	60

**Table 3.** Age and age of sight loss

\* Three participants were excluded given that they provided an explanation and not a number for this question.

Table 4 provides the descriptive statistics for gender, which is nearly counterbalanced between men (45.8%) and women (54.2%).

Gender	Counts	% of total
Male	70	45.8 %
Female	83	54.2 %

**Table 4.** Gender

Table 5 provides the descriptive statistics for education. The highest education level for the majority is vocational training (44.4%), followed by secondary school (28.1%).

Education	Counts	% of total
Primary school	18	11.8 %
Secondary school	43	28.1 %
Vocational training	68	44.4 %
University	20	13.1 %
Master	4	2.6 %

**Table 5.** Education<sup>6</sup>

Table 6 provides the descriptive statistics for the participants' sight conditions. The great majority are blind (79.7%).

Condition	Counts	% of total
Blind	122	79.7 %
Partially sighted	31	20.3 %

**Table 6.** Sight condition

Table 7 provides the descriptive statistics for their interest in more AD for Western films. The great majority (75.2%) wants to have more AD for Western films, which supports our proposal.

Would like to have more AD for Western films	Counts	% of total
Yes	115	75.2 %
No	2	1.3 %
NA	36	23.5 %

**Table 7.** Interest in more AD for Western films

Table 8 provides descriptive statistics for age and age at which the participants started to lose sight for each of the three levels of the AD version variable.

	AD version	Age	Age at which started to lose sight
N	Chinese	51	51
	Translated	51	48
	Localised	51	51
Missing	Chinese	0	0
	Translated	0	3
	Localised	0	0
Mean	Chinese	45.0	15.9
	Translated	45.4	10.0
	Localised	44.3	10.8

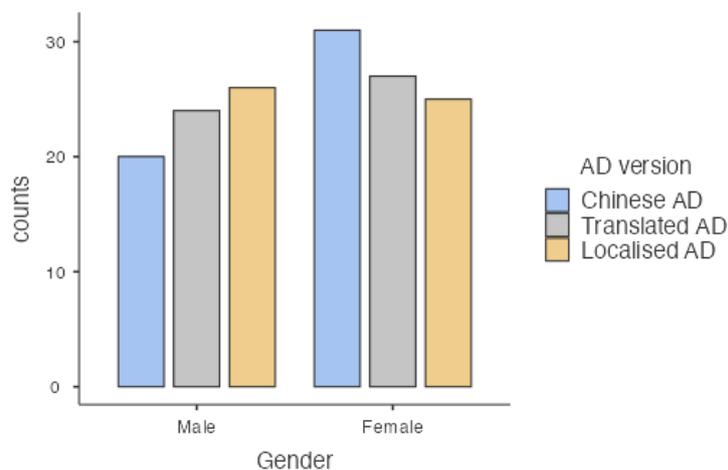
<sup>6</sup> In the Chinese education system, secondary education (中学, *zhongxue*) covers two phases on the International Standard Classification of Education scale: compulsory lower secondary education—middle school—and senior secondary education—high school. It is followed by higher education—universities—and vocational education (专科, *zhuanke*).

Median	Chinese	45	15
	Translated	47	2.50
	Localised	43	3
Standard deviation	Chinese	12.9	16.4
	Translated	13.5	13.4
	Localised	12.9	12.4
Minimum	Chinese	21	0
	Translated	18	0
	Localised	20	0
Maximum	Chinese	66	60
	Translated	70	50
	Localised	71	44

**Table 8.** Age and age of sight loss by type of AD

All statistics (mean, median, SD, minimum, and maximum) in the case of age have a very low range, which indicates that all groups have similar characteristics. The range is much higher in the case of the age at which the participants started to lose sight, as can be seen in the median of the three groups (Chinese AD = 15 years; Translated AD = 2.5 years; Localised AD = 3 years). This could affect the results for comprehension and presence.

Figures 1-4 provide the counts for each category for the rest of the variables divided by AD version.



**Figure 1.** Gender by type of AD

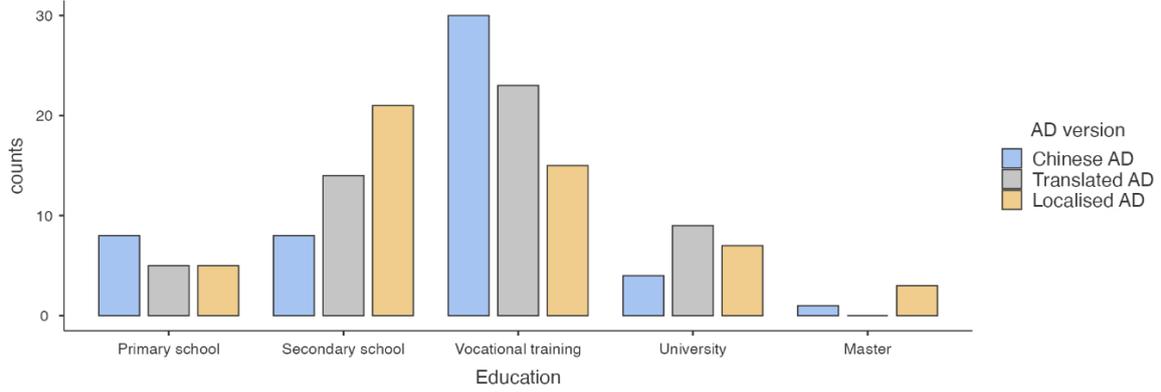


Figure 2. Education by type of AD

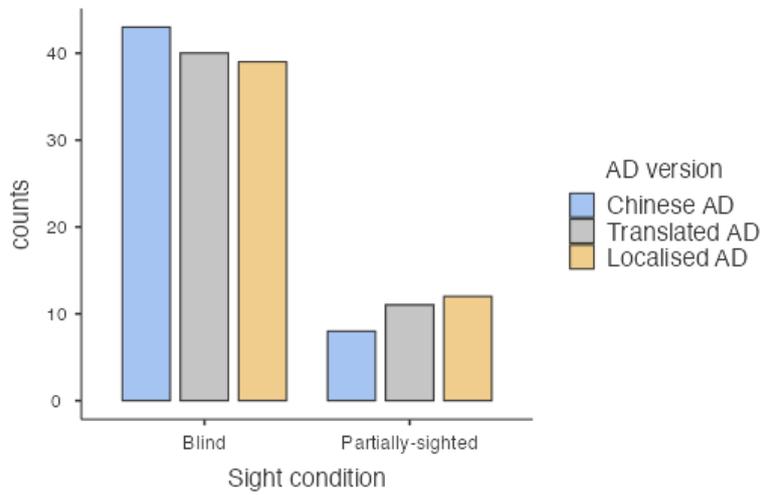


Figure 3. Sight condition by type of AD

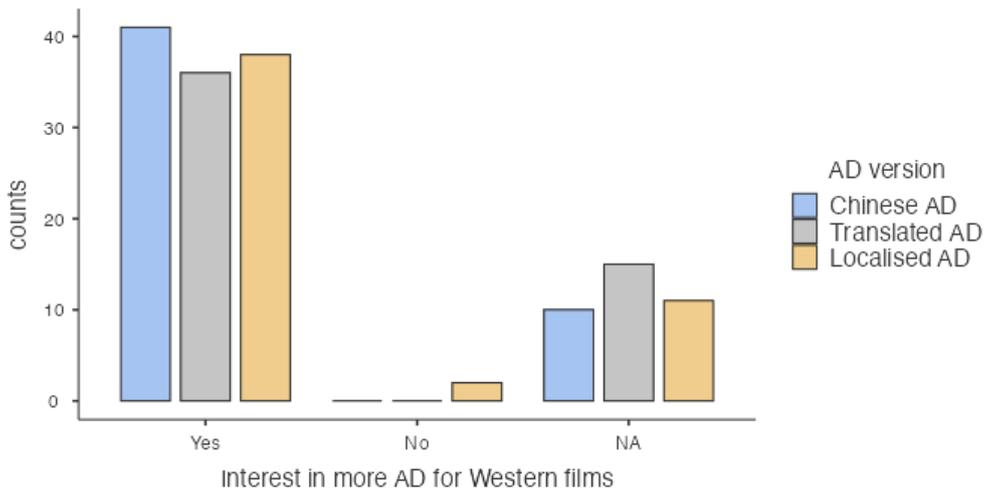


Figure 4. Interest in more AD for Western films by type of AD

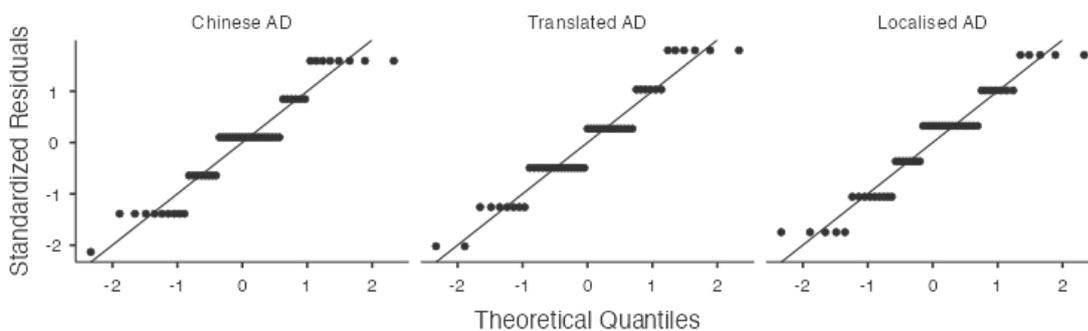
Overall, the experimental groups are well-balanced. The only case in which there could be a relevant difference in the sample groups is education: secondary school and vocational training show opposing group composition.

### 4.2. Comprehension

This section of the questionnaire consisted of five questions. The number of correct answers was added up for each participant. The resulting variable ranged from 0 (no comprehension) to 5 (total comprehension). The Shapiro-Wilk test and Q-Q plots were computed to determine whether the data in the variable *Comprehension* were normally distributed. As shown in table 9 and figure 5, they were not.

	AD version	Comprehension
Shapiro-Wilk w	Chinese AD	0.915
	Translated AD	0.929
	Localised AD	0.929
Shapiro-Wilk p	Chinese AD	0.001
	Translated AD	0.005
	Localised AD	0.004

**Table 9.** The Shapiro-Wilk test for comprehension by type of AD



**Figure 5.** Q-Q plots for comprehension by type of AD

Consequently, the Kruskal-Wallis as an omnibus test was selected to compare the three AD types. The result of the test, KW [df = 2] = 1.32, was non-significant ( $p = 0.518$ ). Consequently, no post-hoc tests were performed. In short, there are no differences between types of AD when it comes to comprehension.

The Kruskal-Wallis test was performed again with the age at which the participants started to lose their sight as a categorical variable to test whether the differences observed in the demographic section had an effect on their comprehension. The original quantitative variable was converted into a categorical one by dividing the participants' responses into three groups with a similar number of subjects in each one (percentiles 33 and 66). Consequently, group 1 comprised 56 participants with ages of sight loss from 0 to 1; group 2 had 48 participants with ages from >1 to 16; group 3 was formed by 46 participants with ages from >16 to 60. The Kruskal-Wallis test showed no differences among the three groups ( $p = 0.073$ ).

The Mann-Whitney *U* test, a non-parametric test to compare two independent groups, was performed to compare comprehension between participants with secondary education ( $n = 43$ ) and participants with vocational training ( $n = 68$ ). The results were significant ( $U = 1040$ ;  $p < 0.001$ ;  $r = 0.289$ ). The second group with vocational training had higher scores than the first

one indicating a better comprehension level, as seen in the mean of the two groups (secondary school = 2.07; vocational training = 2.81) and the median (secondary school = 2; vocational training = 3). The two groups also showed differences in the number of participants between types of AD (see figure 2).

### 4.3. Presence

The following analysis checked item by item whether there were any differences in the participants' perception according to the type of AD. The data, which consisted of items originally scored on a range from 1 to 5, were found to have a non-parametric distribution. To determine whether there were any differences among the three groups, the Kruskal-Wallis test was thus applied (see table 10), but no statistical difference was found. All participants seemed to have a good immersion experience with a mean score for all items above 3.30 for the three versions, except the two related to Negative Effect (< 2.60) and one item on Spatial Presence ("I had the sensation that I moved in response to parts of the movie") (Chinese AD: mean = 3.18; Translated AD: mean = 3.24). Some participants who answered the questionnaire orally clarified that they remained motionless while viewing the film due to their high concentration, which may be partly attributed to the availability of AD.

	AD version	Mean	SD	Difference?
<b>Items related to Negative Effect</b>				
I felt disorientated.	Chinese	2.39	1.097	KW [df = 2] = 1.368; $p = 0.505$
	Translated	2.33	1.089	
	Localised	2.59	1.134	
I felt tired.	Chinese	2.47	1.084	KW [df = 2] = 1.395; $p = 0.498$
	Translated	2.35	1.074	
	Localised	2.57	1.044	
<b>Items related to Engagement</b>				
I would have liked the experience to continue.	Chinese	3.65	1.055	KW [df = 2] = 0.139; $p = 0.933$
	Translated	3.75	0.956	
	Localised	3.73	0.827	
I vividly remember some parts of the experience.	Chinese	4.20	0.566	KW [df = 2] = 3.455; $p = 0.178$
	Translated	4.04	0.564	
	Localised	3.90	0.855	
I paid more attention to the movie than I did to my own thoughts.	Chinese	4.14	0.566	KW [df = 2] = 1.195; $p = 0.550$
	Translated	3.96	0.799	
	Localised	3.88	0.993	
I lost track of time.	Chinese	3.67	0.952	KW [df = 2] = 3.610; $p = 0.165$
	Translated	3.35	1.110	
	Localised	3.73	0.981	
I responded emotionally.	Chinese	3.51	0.987	KW [df = 2] = 0.0648; $p = 0.968$
	Translated	3.55	0.901	
	Localised	3.53	0.966	
<b>Items related to Spatial Presence</b>				
I felt that the characters and/or objects could almost touch me.	Chinese	3.31	1.068	KW [df = 2] = 0.673; $p = 0.714$
	Translated	3.51	1.027	
	Localised	3.41	1.004	
I felt I was visiting the places in the movie.	Chinese	3.71	0.832	KW [df = 2] = 0.915; $p = 0.633$
	Translated	3.49	0.925	
	Localised	3.57	0.900	
I had the sensation that I moved in response to parts of the movie.	Chinese	3.18	1.161	KW [df = 2] = 8.765; $p = 0.645$
	Translated	3.24	1.124	
	Localised	3.39	1.021	
I had a sense of being in the movie scenes.	Chinese	3.88	0.840	KW [df = 2] = 0.869; $p = 0.648$
	Translated	3.88	0.816	
	Localised	3.73	0.896	
<b>Items related to Ecological Validity</b>				
The scenes depicted could really occur in the real world.	Chinese	3.49	0.946	KW [df = 2] = 0.0857; $p = 0.958$
	Translated	3.49	0.967	
	Localised	3.55	0.879	
The content seemed believable to me.	Chinese	3.43	1.044	KW [df = 2] = 0.999; $p = 0.607$
	Translated	3.35	0.796	
	Localised	3.51	0.834	

**Table 10.** Kruskal-Wallis test for presence by type of AD

The Kruskal-Wallis test was performed again with the age at which the participants started to lose sight as a categorical variable to test whether the differences observed in the demographic section had an effect on their perceptions of the different items of the ITC-SOPI. The result was only significant in a single item—the above-mentioned item on Spatial Presence (“I had the sensation that I moved in response to parts of the movie”) ( $p = 0.04$ ). Given that for the rest of the items the age at which participants started to lose eyesight had no effect on their perception, descriptive statistics were not computed.

The Mann-Whitney U test, performed with participants with secondary education vs vocational training, yielded non-significant results.

#### 4.4. Satisfaction with quality

Table 11 provides results of participants’ satisfaction with the quality of the AD version they were assigned. The results show that the participants were very satisfied with the three AD versions in general, with mean  $> 4$  for the three ADs. The data, which consisted of items originally scored on a range from 1 to 5, were found to have a non-parametric distribution. The Kruskal-Wallis test was thus applied to detect differences among the three groups.

	AD version	Mean	Mdn.	SD	Min.	Max.	Difference?
Satisfaction with quality	Chinese	4.53	5	0.612	3	5	KW [df = 2] = 7.750; $p = 0.021$ ; $\epsilon^2 = 0.051$
	Translated	4.12	4	0.816	2	5	
	Localised	4.39	4	0.723	2	5	

**Table 11.** The Kruskal-Wallis test for satisfaction with quality by type of AD

The result of the test was significant. Therefore, post-hoc tests were performed. The Dwass-Steel Critchlow-Fligner post-hoc comparisons showed a significant difference ( $W = -3.79$ ;  $p = 0.02$ ) between the participants who received the Chinese AD (mean = 4.53) and those who received the Translated AD (mean = 4.12). No statistical differences were observed between the Chinese and Localised ADs ( $W = -1.32$ ;  $p = 0.619$ ) or between the Translated and Localised ADs ( $W = 2.61$ ;  $p = 0.154$ ), though the latter group (mean = 4.39) scored much higher than the former (mean = 4.12). From the descriptive point of view, the Chinese AD was received best (4.53), followed by the Localised AD (4.39) and the Translated AD (4.12). However, from the inferential perspective, the Chinese AD was perceived as being of higher quality than the Translated AD, while there was no clear gradation between the three AD versions. Therefore, our hypothesis was only partially confirmed.

The Kruskal-Wallis test was performed again with the age at which the participants started to lose sight as a categorical variable to test whether the differences observed in the demographic section had an effect on their satisfaction with quality. The result was non-significant ( $p = 0.068$ ).

The Mann-Whitney U test performed with participants with secondary education vs vocational training (which also showed differences in the number of participants among types of AD) yielded non-significant results ( $p = 0.259$ ).

To recapitulate, the only factor causing a relevant difference in comprehension in our study is the education level: the participants with vocational training seemed to understand the film better than those with secondary education. The AD versions did not show a relevant difference in comprehension or presence, indicating that AD translation could be a possible alternative for AD creation. The Chinese AD proved significantly more satisfying than the Translated AD, though the persons who were given the Localised AD scored higher than those who received the Translated AD. Therefore, from the descriptive point of view, the Chinese AD scored highest in acceptance, followed by the Localised AD and the Translated AD. However,

from the inferential perspective, the Chinese AD was perceived to be of higher quality than the Translated AD, and there was no clear gradation between the three AD versions. Overall, our hypothesis was only partially confirmed.

## 5. Qualitative results

The quantitative results demonstrated a favourable response to the three AD versions, perhaps due to the generally positive attitude of participants to the availability of AD products, in line with Tor-Carroggio (2020a). Furthermore, the comments of some informants also provided meaningful insights. Some users provided opinions regarding our proposed AD translation, which was directly relevant to our research goal of testing the feasibility of translating AD from Spanish into Chinese. Additionally, they expressed their views on AD in general, which although not directly related to the study objective, aided in gaining a better understanding of AD in China from the user's point of view and shed light on possible future research lines based on their needs. Therefore, we think this part of the users' feedback is also valuable. This section will first present some advice from the participants for our proposal of AD translation or AD localisation, followed by other feedback from them concerning AD in general. The AD version will be indicated in case the comment is specific to the difference between the three ADs.

### 5.1. Comments on AD translation

Two participants expressed that the film genre preferred or more suitable for AD translation should be drama with straightforward plots. This is in line with previous findings from an interview-based study with several Chinese AD providers (Liu, in press), suggesting a preference for heavily story-oriented feature movies.

One participant (Translated AD) said that the credits could be omitted. Both the Chinese and the Localised AD did not include credits. Another (Translated AD) said it was disruptive when credits were inserted between dialogues at the beginning of the film.

Many participants mentioned the difficulty of remembering foreign names. This was also pointed out by a skilled AD script writer explaining some AD strategies for naming characters. For example, in interpersonal relationships, a Western name translated into Chinese is usually longer than common Chinese names and can be difficult to pronounce.

Several participants, including the voice talent for the three ADs, commented on the translation of the Spanish singular third person pronouns (*ella* and *él*) as being problematic. As for the Translated AD, the translator pointed out she translated the Spanish pronouns *ella* 'she' and *él* 'he' as *nüren* (女人) 'woman' and *nanren* (男人) 'man', respectively, to avoid confusion among the audience, since they are both pronounced *ta* (她/他) in Chinese. In the case of the Localised AD, the same strategy was adopted on some occasions, while on others, the characters were referred to by their names. Nevertheless, saying *nüren* (女人) 'woman' and *nanren* (男人) still caused some confusion as far as the identification of the characters is concerned. One participant (Translated AD) with experience in revising AD scripts said it was difficult to know who the AD was referring to with scene changes, and it might be better to name characters directly. This opinion was also shared by another participant (Translated AD). He also recommended avoiding overlapping between AD and dialogues and suggested localisation when translating AD into Chinese, given linguistic and cultural differences. Other participants also highlighted the need for localisation, although none provided further details about how to do it.

Finally, one participant (Translated AD) thought the initial silence gap in the film was too long, and suggested adding a short synopsis of the film, followed by information about the cast and crew. This is in line with the opinion of some of China's key AD providers on the need to fill the silences to provide as much information as possible to the users (Liu *et al.*, under review).

## 5.2. Comments on AD in general

Many participants underlined the importance of sound in AD, including AD prosody and the sound mix of the original soundtrack and the AD. One informant stated that AD's effects could be enhanced by adjusting the sound level of both the soundtrack and the AD. He also thought more visual information should be described for persons with sight loss to construct their mental imagery. Another participant indicated that too fast a speed of AD would hinder comprehension. He was also in favour of making explicit crucial elements for a correct understanding of the film, such as revealing suspense, considering the limited education level and the advanced age of most persons with sight loss.

Regarding the sound mix of the three ADs in our study, some participants said it was difficult to hear the AD when the original soundtrack was too loud, while sometimes the AD was much louder, covering the original soundtrack. Along a similar line, two participants said they would like the volume of AD to be lower than that of the original soundtrack to distinguish between the two. One participant stressed that AD should not cover all the sound effects, as they are also essential for immersion. Concerning AD prosody, a regular AD user claimed that a voice consistent with the movie atmosphere without too much personal intervention would better engage the audience.

Some participants distinguished two viewing settings: live AD in a group session and recorded AD enjoyed individually. They highlighted the benefit of live AD for enhancing emotional response and facilitating interactions between AD providers, mostly the AD voice talent, and the audience.

One participant indicated that most attendees of live AD sessions in his district were persons with low vision. Several participants suggested that AD should provide limited information to reduce cognitive load for blind individuals. One of them thought that the amount of information required might vary depending on the individual's sight conditions. It might justify the acceptance of our proposal among Chinese AD users again, considering Spanish AD tends to be much shorter than Chinese AD. However, the preference for shorter AD was only reflected by the feedback from a few participants, compared with higher satisfaction with quality with the longer Chinese and Localised AD among the majority of the participants. Two participants with low vision (Localised AD) highlighted that anticipating information for only a few seconds could be confusing due to non-synchronization between the scene and the AD.

Finally, while one participant expressed the importance of including persons with sight loss in AD creation, another thought they were inadequate to write or deliver AD. This participant had attended a training course given by an AD group in Shanghai for AD delivery by persons with sight loss. His observation was that it would take them, particularly the elderly, more time than sighted people to voice an AD script, and the quality would not be ideal. The justification for this perspective was that they had to listen to their screen readers before repeating the AD, which might therefore not sound fluent enough.

To sum up, the participants' different and sometimes conflicting opinions endorse the view that persons with sight loss are diverse and heterogeneous, thus needing more varied AD styles according to their profiles and expectations, as mentioned in Section 2, which calls for more research with a user-centred approach (Greco, 2018, 2019; Greco & Jankowska, 2019).

## 6. Conclusions

This article has presented a reception study on AD translation by testing three AD versions with Chinese AD users: a Chinese AD, a Translated AD and a Localised AD. Results showed that both AD translation and AD localisation take far less time than creating AD in Chinese from scratch. However, it should be mentioned that the actual time for AD creation varies among different AD groups (Liu, in press). Moreover, though creating an AD script in Chinese is much cheaper, it is not easy to compare costs across different countries. AD in China is currently performed on a volunteer basis and AD translation has not yet become a career opportunity, so there are no reference prices available for either of them at this stage. In terms of user reception, our hypothesis was only partially confirmed. From the inferential perspective, the Chinese AD was perceived to be of higher quality than the Translated AD. However, there was no clear gradation between the three AD versions. This study supports AD translation as a viable alternative to AD creation in China, as all three AD versions provided a similarly immersive experience and enabled viewers to understand the narrative content.

The feedback given by our participants has also been an inspiring information source for our study. Their general positive attitude towards the three versions and advice on AD localisation contribute to validating our proposal of AD translation and the necessity of AD localisation. Their views on AD in general help us to better understand their needs for developing possible future studies. The importance of sounds emphasized by some of them has already been underlined by some scholars (Ramos, 2015) to facilitate comprehension, to contribute to coherence and meaning construction, and to enhance immersion, which is linked with emotion elicitation (Salway & Graham, 2003). Besides, studies such as Fryer (2013) and Fryer *et al.* (2013) have examined the relationship between words and sound effects with AD users. These researchers support the linguistic compensation model, which indicates that words are just as effective as non-verbal sounds in creating Spatial Presence and Ecological Validity. The advantages of live AD in a group setting for improving emotional response and fostering interactions between AD providers and users can be attributed to the concept of Social Presence. This is consistent with Fryer and Freeman (2014), who found that AD could actively enhance presence and emotion elicitation when delivered by a human voice instead of text-to-speech, possibly due to an increase in Social Presence.

Our study goes beyond previous research on AD translation (Jankowska *et al.*, 2017; López Vera, 2006; Remael & Vercauteren, 2010) in that AD localisation was tested in an under-researched and distant language pair: Chinese and Spanish. Furthermore, a complete film was used as the basic stimulus instead of short video clips, and a large sample of 153 participants was obtained. Moreover, the methodology applied was very consistent internally, in that the Localised AD was created based on a preliminary version of localisation guidelines for translating AD from Spanish into Chinese that were drafted after triangulating three data sources: interviews with Chinese AD key agents, a corpus study comparing Chinese and Spanish ADs, and participant observation (Liu *et al.*, under review). Nonetheless, our study also has its limitations, which should be borne in mind for future research in this field. First, although compared with other reception studies on AD, our sample is relatively big, it is still small and not sufficiently representative considering the complexity and diversity of the group under study, especially in a country as large as China. The recruitment of participants is one of the greatest challenges of reception research with persons with sight loss (Bardini, 2017; Chmiel & Mazur, 2012, 2016; Mazur, 2020; Ramos, 2015). Blind people (79.7%) are over-represented in our study when in fact most people with sight loss in China are partially sighted. Second, familiarity with AD was not taken into account in our study although previous studies suggested expectation may play a role in presence, and those used to AD might be less likely to prefer new AD

approaches (Fryer & Freeman, 2012). Third, due to the online experiment setting, there were many factors affecting the viewing experience that were out of the researcher's control. Such factors include, but are not limited to, the device used to enjoy the AD, background noises, interruption from others, time difference between countries, and technical issues. As it was impossible to administer the questionnaire immediately after the enjoyment of AD orally due to the time difference between the researcher and the participants, memory questions were not included in our questionnaire. In addition, the online setting also excluded technologically illiterate persons, who may constitute a significant portion of our target audience. Fourth, since we measured the overall viewing experience, the answers may be influenced by the movie itself instead of the AD: the multimodal nature of audio-visual work and the complexity of control over variables make it difficult to determine the reasons behind every comment. For the same reason, we have not been able to explain which differences between Chinese AD and Translated AD could be responsible for the differences found in our reception study since we tested the whole AD experience with the users, where many differences between Chinese and Spanish AD found in our previous corpus study (Liu *et al.*, 2022) were included.

Another limitation of our study is the questionnaire used: it was not specifically designed for measuring the overall AD experience, and we had to analyse presence-related items individually. Chmiel and Mazur (2012), who revised their questionnaire six times, also indicated the methodological complexity of questionnaire design. More research is needed on designing a more adequate questionnaire for AD and validating it among persons with sight loss in a specific context, considering their culture, language, and media type, among other factors.

Other avenues for future research include the replication of the present study with other language combinations or film genres. Another possible direction is to explore the differences in immersion and emotion elicitation focusing on Social Presence between live AD in a group session and a recorded AD enjoyed individually, as proposed by Fryer and Freeman (2014). Furthermore, regarding comprehension, future studies could also include memory questions, which is an important confounding variable (Chmiel & Mazur, 2012; Mazur, 2020), together with concentration (Fresno *et al.*, 2014). The results from this reception study can also be considered when refining the final version of our localisation guidelines. This study can contribute to the AD development in China both inside and outside academia. Furthermore, the methodology used might serve as a starting point for more empirical and experimental studies on AD reception in China.

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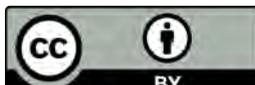
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