Extending the Uses of Museum Audio Description: Implications for Translation Training and English Language Acquisition

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Abstract
The paper outlines the textual and linguistic specificities of museum (or art) audio description (AD), an emergent AD subgenre. The focus of the paper, however, is on the didactic potentials of this form of audiovisual translation in an English L2 setting. If exploited adequately, the process of producing and translating ADs into a non-mother tongue can in fact favour the acquisition of both intersemiotic and inverse translation competence while granting the retention and retrieval of diverse L1 and L2 linguistic forms thanks to the noticing effect that working with AD can induce. A case study on the creation in Italian and the translation into English of a multimodal descriptive itinerary illustrates how museum AD can be employed for explicit and implicit learning purposes, in order to impart professional skills to novice translators.
Key-words: museum audio description, inverse translation, translation competence, didactics.

Introduction

Audiovisual translation can take many forms. It has evolved over the years, and proved to be versatile, i.e., reusable, in contexts and for audience groups for which it was not originally produced (Pérez González 2019; Bogucki and Deckert 2020). A particularly interesting case is audio description (AD), whose original benefits for visually impaired patrons can be extended to people with limited cognitive and intellectual abilities, struggling readers, L2 users including migrants, language learners, or "anyone who can see but who wants to listen to a film without looking at it" (Morisset and Gonant 2008: 1). In this paper, we will focus on art AD, an emergent sub-genre of AD, whose specificities in terms of process

and product make it a powerful training tool in the field of language and translation. After outlining art AD through authentic English examples, we will focus on its multiple yet untapped potential as a means to equip translation students with the skills and competences needed to formulate ADs in their mother tongue and to translate them interlingually into English. This implies the acquisition of professionalising intersemiotic (images into words) and inverse (L1>L2) translation strategies, with possible positive repercussions on the retention of language items, which may result in incidental L2 acquisition. In spite of the "stigma of unprofessionalism" (Weatherby 1998: 21) attached to inverse translation, this often represents a professional reality that translation trainers cannot overlook and must cater for. The analysis of some examples and the description of a case study will enable us to illustrate a training path based on the results of two European projects on AD led by the University of Trieste (ADLAB and ADLAB PRO) but also to highlight some pedagogically interesting points raised by the production and the inverse translation of art ADs. Among others, the implementation of language simplification which is key to complying with plain style in English (Cutts 2013; Bennett 2019; Perego 2020). Ultimately, a qualitative and quantitative comparison between the ADs produced by a student and the ADs produced by a professional describer will serve to raise the central issue of professionalisation in training.

Museum AD: a historical and a textual-linguistic overview

Museum (or art) AD is a subgenre of AD, i.e., a form of accessible, assistive and intersemiotic audiovisual translation that transfers the most relevant nonverbal signs (the visual elements of a text) into a verbal aural narrative for the benefit of people with sight loss (Snyder 2014; Giansante 2015; Remael *et al.* 2015; Fryer 2016; Randaccio 2018; Perego 2019a). Museum AD deals specifically with static art, which includes paintings, illustrations, sculptures, objects, installations, but also landmarks, gardens and plants, as well as architectural and heritage sites – to mention the most common artistic categories (Hutchinson and Eardley 2019; Pacinotti 2019; Salisbury 2000, Taylor and Perego 2021).

Compared to other AD forms, especially screen AD, art AD is at a relatively early stage of development both in terms of

provision and of research. It did not emerge until the 2000s, when the traditional museum-temple model characterised by a hands-off policy and a strictly encyclopaedic nature started to become more open, engaging, interactive and participative (Eardley *et al.* 2010; Black 2012).

The idea of making museums accessible through ADs was revolutionary and constructive when it emerged a couple of decades ago. Today it is an established practice especially in Anglophone countries, where thanks to encouraging legislation and to the development of targeted organisations (e.g., Art beyond Sight in the US and VocalEyes in the UK) it is promoted more systematically than in other countries.

For many years, descriptions meant for people who are blind and visually impaired were produced as *the* way to promote inclusion. Today, some museums still produce successful targeted descriptions. But in recent years, some have begun advocating tours that can work successfully *for all*, i.e., for both sighted and blind audiences (Giansante 2015; Neves 2018), thus favouring an inclusive approach based on the idea that what is accessible for disabled categories is an opportunity for everyone else. In fact, recent views on the role of museum access, and therefore AD, suggest that it "could potentially serve as an important inclusive design tool for any visitors who struggle to engage with the museum experience, regardless of their level of vision" – especially if "enriched" (Hutchinson and Eardley forthcoming; Eardley *et al.* 2016, 2017; see also Taylor and Perego 2021)[1].

An interesting definition of art AD is offered by the British service provider VocalEyes on its website:

Audio description is the principal means of bringing arts and heritage to life for blind and partially sighted people. It is the use of precise, logically structured language, interwoven with historic references and cultural narratives, to evoke an artefact or a place. It can be delivered

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[1] "Enriched" ADs enable visitors to consume the museum multimodally. Not only do they rely on a verbal description of the items in question, but they also employ sound or olfactory effects, music and touch, to create a more immersive, embodied, memorable experience (Eardley *et al.* 2017) thanks to the enhanced cognitive processes activated by multisensoriality (Moreno and Mayer 2000; Lehmann and Murray 2005).

live, as an audio-described tour, or as a recorded guide, for visitors to use independently. (VocalEyes: https://vocaleyes.co.uk/about/)

Besides emphasising the assistive role of AD in granting access to the arts, this definition refers to a primary aspect of this audiovisual translation mode: the use of precise and logically structured language. These features are common to all AD types, where precision is accomplished through varied and descriptive – but concise – vocabulary (Perego 2019a: 119ff). The constraints of most AD types do not enable describers to indulge in lengthy descriptions, so appropriate word choice can make a difference between a good and a bad AD. The excerpt below can help to exemplify the situation (film dialogues are in brackets):

Example 1)
Screen AD (*The shipping news*, Hallström, 2001, AD by Di Langford)

01:01:06
A burly man stands at the edge of a lake.
01:01:14
He knocks the child into the water.
01:01:16
The boy gasps for breath, goes under again.
01:01:24
He struggles desperately.
01:01:35
The young boy slowly sinks through the murky water, (come on) feebly he moves his arms (you're not trying) he rises to the surface (nobody's going to make it easy for you) growing through adolescence to adulthood.

The sentences can fit in-between dialogues because they are short and simple, that is, normally composed by one independent clause and comprising few unelaborated syntactic functions. Phrasal head modification is limited, and so is embedding. When they are not pronouns, the subject elements include a head preceded by a determiner (*the boy*), or sometimes an adjective modifier that qualifies the head (*A burly man*; *The young boy*), thus eluding the structural and informative potentials of complex noun phrases (Biber *et al.* 1999). Verbs, which are central elements in

the sentence, are semantically rich and include static verbs (*to stand*); verbs describing the doer's attitude (*to knock into*); verbs of movement describing the direction of the movement (*to rise*, *to sink*). Adverbial elements are used especially if obligatory (cf. the idiomatic expression *to knock someone into something*, or the bivalent verb *to go*), or when they are subject-related and offer important information (e.g., the spatial adjunct *at the edge of a lake*). Other adverbs are optional but informative and uncommon (*desperately, feebly*); so are the adjectives: *murky*, for instance, typically referring to dark, dirty liquids, displays a frequency of 228 in the BNC (2007).

Other AD types behave differently. A corpus-based study on the English language of art AD demonstrated a similar trend as far as lexicon is concerned, but a substantial syntactic difference. The professional art ADs analysed are in fact descriptive and informative (as demonstrated by their lexical variety and density), avoid linguistic vagueness, use monoreferential specialised terminology (e.g., *installation, hieroglyphs*), and rely on simple and compound adjectival descriptors (e.g., *pendulous*, *protruding*) to enhance the visual intensity of the narration (Perego 2019b). When it comes to syntax, however, they feature much longer sentences than screen ADs, thus partly contradicting guidelines. In the corpus, we observed sentences exceeding 25 words when the average in English normally equals approximately 14-15. Sentences include dependent clauses (*The dark golden colour of the brass has acquired the brown patina of age* as *the metal has come into contact with the air*), and their syntactic functions are structurally complex – therefore longer. Noun phrases tend to comprise both pre- and post-modifiers (*The dark golden colour of the brass*); copular verbs link simple subject elements to complex complement elements, as in the case of *The Stone is a tablet of black basalt – part of a larger inscribed stone that would have stood some 2ms high*, where the head *tablet* is modified by a prepositional phrase whose noun element is further expanded by a reduced relative embedding a relative clause. Additionally, art AD sentences deviate from the norm resorting to structures that are normally avoided in other types of ADs (and in Plain English) because they hinder readability. Randaccio (2018: 293), for instance, shows the use of the passive voice when relevant processes are described (cf. *are made*, *clay has been glazed*, and *rubbed* in the

description of three ancient pots located in the Africa room of the British Museum).

If film AD normally requires very short sentences, art AD is freer – even though it has to consider the needs, background and attentional limits of its mixed audience, and therefore the length of the text should be adapted accordingly (Giansante 2015). They usually have a logical structure, or a "communicative plan" (Randaccio 2018), and include hierarchically ordered information blocks and "moves" (Swales 2004). They comprise basic information on the artwork itself (title, author, year, location, etc.), a description proper, and historical background. Finally, art ADs typically rely on internal cohesive devices that hold the text together (*The Stone is...; it measures…; the top part of the stone is…; the back of the Rosetta stone …; it…; The top band consists of…*), and on deictic elements that orient the AD user towards the space of the museum room (*At the bottom of the wall, is…; To your left is…*). These instructions can be very detailed when the scope of the description is to maximise the independence of the visitor:

Example 2)
Directions at the Natural History Museum in London (*Human Evolution Gallery*)

At the security desk, turn right. After a couple of paces, turn right again. You are standing at one end of a long lower ground-floor foyer. At this end, to your left, is a staffed information desk where staff can help if you have any questions. There's a bench facing it, to your right. At the far end of the foyer, just past glass double doors on your right, is a cloakroom.

How the complexity of these texts can be exploited pedagogically is dealt with in the next paragraphs.

The overt and the covert potentials of AD

The training and pedagogic potentials of audiovisual translation have long been widely recognised: different audiovisual translation

types are nowadays used more and more systematically to cater for specific translation and language learning needs at different learning levels and in different sectors. AD is a newcomer in this area. Originally meant for visually impaired audiences, it is processed effectively and received positively also by sighted viewers, and in fact it can be exploited successfully by a larger group of users than the original based on its efficacy and flexibility. AD is a helpful aid to literacy (Snyder 2014: 86), and a great source of comprehensible input for language learners (Beyond Language Learning 2018). For instance, listening to it helps to improve oral, cultural as well as lexical and phraseological competence in foreign language learning (e.g., Ibáñez and Vermeulen 2013). Additionally, the acquisitional potential of AD has been proven also in very young users: AD is an effective aural guide of children's visual attention, it facilitates children's understanding of the content of educational movies and helps them to remember and use specialised vocabulary actively, thus increasing their specialised lexical competence (Krejtz *et al.* 2012; Walczak 2016). The considerable benefits of AD, however, are not limited to contexts where users are exposed passively to this translation form. The active use of AD can be equally helpful: AD tasks (such as describing clips or images in a foreign language, writing, discussing and comparing ADs, also collaboratively) have in fact resulted in the enhancement of diverse language competences including oral production skills (Baños and Stavroula 2015; Talaván and Lertola 2016; Navarrete 2018).

In this paper, we will explore the potentials of AD as a means to equip translation students with multiple implicit and explicit skills in the realms of translation training and language acquisition. Recently, at the Section of Studies in Modern Languages for Interpreting and Translation of the University of Trieste, several BA and MA theses have focused on AD (in the last three years, approx. 15 focused on art AD and over 10 on other aspects of AD), as a consequence of the interest consolidated during the development and after the completion of two European AD projects (ADLAB and the ADLAB PRO)[2]. The ADLAB project

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[2] The ADLAB project (Audio Description: Lifelong Access to the Blind, 2011-2014) was launched under the Lifelong Learning Programme and was coordinated by

drew up research-based strategic AD guidelines to inform
AD practice at international level. The ADLAB PRO project
produced online flexible training materials for the formation of
the AD professional.

English translation students who write their dissertation on AD
normally develop a theoretical background on AD and then move
to a hands-on approach that enables them to formulate ADs in their
L1 and translate them into English (L2). This double process implies
the development of both intersemiotic translation competences
(students learn to audio describe) – a sectorial translation type in
growing demand – and inverse translation – a highly professionalising
practice required on the market in spite of it being regarded as
undesirable (Weatherby 1998). This double practice has various
implications and the collateral skills that students develop progress
in steps.

The first step is primarily L1-focused even though it is deeply
rooted in the translation practice. Intersemiotic translation (or
transmutation; Jakobson 1959) in fact results in the production
of L1 ADs. This challenging process entails the development of
strong observational skills and the ability to select the source text's
most meaningful visual information and to transfer it verbally and
concisely (Snyder 2014; Giansante 2015; Perego 2019a;). The second
stage is primarily L2-focused: the Italian AD is translated into
English, thereby giving students experience in inverse translation
practice and using resources that are conducive to noticing aspects
of language in a comparative way.

Both phases put a major focus on writing, editing and
summarising, which are applied to specialised language texts.
These processes are highly complex and challenging, involve
several cognitive and metacognitive processes, and are instrumental
to both L1 strengthening and L2 learning. In particular, writing
activates previous knowledge (*schemata*), develops research
skills and critical thinking, forces students to plan and organise
thoughts into organised units, contributes to convert passive into

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active vocabulary, and it has the effect of consolidating literacy and strengthening verbal skills thanks to the motivation and the involvement it triggers (Graham and Herbert 2011; Smetanová 2013). Summarising improves the ability to recognise, select and paraphrase the main ideas in a text and create transitions between them; it is conducive to "syntactic maturity" (Robinson and Howell 2008) because it prompts the implementation of syntactic transformation (often necessary to shorten original texts), activates the practice of paraphrasing and deletion strategies, enables writers to learn new sentence combinations; it improves the ability to practice writing conventions; it advances literacy (Gao 2013; Graham and Herbert 2011; Hosseinpur 2015), and shows that "less is more" – as proponents of simplicity in several fields like to put it (see Snyder 2014 for AD and Guillot 2012 for subtitling). To report an example in the realm of art AD, the Italian description of the statue of Venus (National Archaeological Museum of Aquileia) underwent more than eight revisions, including one by the museum curators, before being shortened to 450 words in the final version from the initial 929 of the first draft (Valle 2019). A decrease of approximately half the number of words from the first to the last draft was observed in several occasions: for instance, in the AD of a TV advert, a reduction from 233 to 103 words was observed comparing the first AD attempt and the final version (Taylor 2015).

L2 ADs are the result of an inverse translation process whereby the Italian source text which is highly planned and edited needs simplification to comply with the plain style typical of the English language (Cutts 2013; Bennet 2019; Perego 2020)[3]. Clarity, language economy and precision become a student's concrete communicative goal, which is worked towards by adopting the principles of Plain English and effective writing. Students translating into English often report the process of splitting long Italian sentences (with a complex register incorporating dependent clauses) into shorter English sentences (based on clausal syntax and avoiding complex

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[3] Cf. the European project EASIT (Easy Access for Social Inclusion Training) co-ordinated by Anna Matamala aims at simplification in AD and other audiovisual services with the purpose of enhancing their usability for people with cognitive and intellectual disabilities (https://pagines.uab.cat/easit/en).

phrasal syntax), or the choice of finite clauses over non-finite clauses (De Felice 2019; Valle 2019; Colman 2020). In Example 3, illustrating the Italian AD of a marble statue and its English translation (De Felice 2019), the 41-word Italian text is reduced to 29 in English. In English we observe a change in the sentence theme (the woman vs. her dress), the choice of finite clauses and of a paratactic style. At the lexical level, the Italian periphrastic constructions (e.g., *finisce per raccogliersi*) are substituted by plain English verbs (*gathers*), and formal thematic words (*drappeggio*) by core-vocabulary alternatives (*dress*). These choices are based on the assumptions that removing unnecessary information enables the remaining to be clearer, and that complex registers are not inclusive (Cutts 2013; Perego 2020).

Example 3)
ADs of *Beauty holding back Time* (D. Barcaglia, 1875)

Il vestito della ragazza, un drappeggio leggero di marmo, le scopre le gambe fino alle ginocchia, per poi trasformarsi in un velo che copre le parti intime dell'uomo e che finisce per raccogliersi sulla roccia dove il Tempo poggia il piede.	She wears a thin dress made of marble, reaching to her knee, whose trail covers Time's private parts and gathers on the rock on which Time's foot is leaning.

Both the writing and the inverse translation phases put a focus on specialised textuality and vocabulary, which students tackle simultaneously and comparatively resorting to corpus-based text analysis (using both pre-constructed and DIY corpora of professional art ADs) and consulting online parallel texts. This enables them to develop and master L1 and L2 jargon (*colpi di pennello/ brushstrokes*) and routinised language (cf. simple formulaic expressions such as *un olio su tela/oil on canvas*, or collocations such as *un'opera di/a painting by*; but also more complex expressions such as *La figura di… è in secondo piano/The figure of… is in the background*), and recurring rhetorical units with a coherent communicative function

(or moves; Swales 2004: 228-9) that will be transferred into their productions. An example is the following, where the visitor is instructed on how to start performing the tactile exploration of a bas-relief autonomously:

Example 4)
Tactile instructions in AD

Cominciate l'esplorazione partendo dai bordi per riconoscere la cornice modanata a scalini che corre intorno alla figura e che ha la forma di un rettangolo alto circa 95 cm e largo 75 cm.	Start exploring the exhibit from its edges to recognize the moulded stepped frame that surrounds the figure and that has the shape of a rectangle about 95 cm high and 75 cm wide.

We notice a non-conative imperative used to politely invite the visitor to take action; the incorporation of directional instructions on the way to approach the bas-relief; detailed measures. In Example 5, the AD of a picture frame is proposed (Di Luca 2018: 54 and 57) that could be reused with slight adaptations: the text in bold type can in fact be filled in with different information depending on the frame being described:

Example 5)
AD of a picture frame

La cornice del quadro è **dorata** e di forma rettangolare, composta da **diversi bordi decorati con intarsi geometrici che man mano si allargano**. Al centro del bordo inferiore si trova una piccola targa che riporta il nome dell'artista **in caratteri grandi**, le date **1791** e **1881** separate da un trattino e infine il titolo del quadro.	The gilt frame is **gold-plated** and rectangular, made up of **various edges that are decorated with geometric inlay patterns that progressively widen**. In the middle of the lower edge there is a plate with the artist's name, the dates **1791** and **1881** divided by a hyphen and the title of the painting.

From the point of view of the textual pattern, we observe a general-to-specific approach where the text provides information on the colour, the edge pattern, the lower edge plate and the nature of the text on the plate.

Parallel texts (i.e., corresponding original texts in different languages that are written by competent native speakers resemble one another in the topic they discuss and in their communicative function; Hartmann 1980; Floros 2004) are a further functional source of information related to the specific use and context of terms. They are decisive tools for comparative linguistic examination; they help in the process of all subfields of translation; they are used by professional translators to refine their target language, and they are key in LSP-translation for terminology extraction and management (e.g., at a microtextual level, solving polysemy problems; at a macrotextual level, managing thematic structures and textual norms in different languages; Floros 2004).

Consulting parallel texts is a professionalising practice our students implement willingly, and a useful strategy in the real market, where

translators often have to switch from one area to another, which means that they have to be flexible enough to consult a lot of available resources. The problems that come along with this constant switching do not only concern terminology and/or information relevant to textual conventions, for which interlingual parallel texts are a major help, but they also concern microstructural choices that the translator has to make. (Floros 2004: 37)

Both the practice of inverse translation and the consultation of parallel texts have established overt implications in the didactics of translation and useful covert language acquisition implications. In fact, both rely on 'noticing', i.e., the conscious attention to target linguistic forms, where 'form' refers to lexical, grammatical, and pragmalinguistic features (Ellis 2016; Long 1988; 2015), which is a powerful catalyst for language acquisition (Schmidt 1990). Parallel texts encourage and facilitate autonomous noticing while texts on the same subject are processed side by side, and enable students to be exposed to comprehensible language input occurring in an authentic linguistic context, under a light cognitive load and in a

safe environment. Parallel texts therefore contribute to the growth and refinement of specialised vocabulary, but they also raise the awareness of syntax and of text-specific discourse features even when the focus of the task is translation. Likewise, editing and simplifying the English ADs encourages focus-on-form and brings salience to targeted features, thus inducing their noticing. Specific linguistic forms are therefore not taught directly, but students come across them while trying to refine other competences, and acquire them as a co-product of the translation process.

A case study: The Civic Botanical Garden of Trieste

The Civic Botanical Garden of Trieste is one of the city's science museums. As in most of them, here too accessibility is not fully implemented. This is why we decided to produce a bilingual "enriched" (Eardley *et al.* 2017) audio guide of the Garden (Colman 2020). This will serve as our case study to illustrate the most relevant stages and aspects of the thesis work on bilingual ADs.

The audio guide was devised to escort users through the Garden with an itinerary comprising five stops corresponding to five plants: lavender, jasmine, wisteria, lotus, and wild mint. These plants are meant to be enjoyed through an audio narration, as well as through guided tactile and olfactory experiences used to make the visit more dynamic, effective, enjoyable and memorable (Moreno and Mayer 2000; Eardley *et al.* 2010; Black 2012). Botanical gardens have in fact a huge potential for people with sight loss (Salisbury 2000), especially because they lend themselves well to multimodal enjoyment. Each plant AD was structured to include the same moves in the same order to give cohesion to the descriptive tour. Figure 1 illustrates the fixed phases in which the AD text is organised. Recurring language chunks were used to introduce each phase, and approximately the same information was provided for each plant – e.g., type and colour of flowers and foliage.

Stand-alone plant AD structure
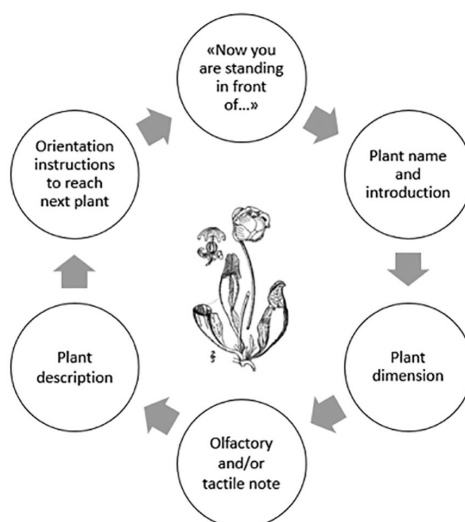
Simple routinised language chunks were then devised to link each stand-alone AD and guide the visitor from plant to plant: *Now you are standing in front of*; *If you want to reach [next plant]*; *Turn X degrees to your right/left*; *Go straight for about X steps*. A quick look at the most frequent phrases used in the itinerary (henceforth the Botanical Corpus, comprising 1470 words in total) confirms that they all pertain to orientation and directional information (cf. *in front of*, *turn ninety degrees to*, *go straight for about*; *if you wish to continue*; etc.). The rest of the text features a high lexical variety related to the diverse features of each plant, and to the use of peripheral low-frequency rather than core and high-frequency lexical items (Biber *et al.* 1999; Biber and Reppen 2015).

Describing the plants enabled the student to deal with bilingual botanical terms and to develop specialised plant related collocations, ranging from "strong collocational associations" (Biber and Reppen 2015) (e.g., *wisteria clusters*, *jasmine hedge*, *lavender bush, wild mint, sessile leaves*), to looser associations of words, exemplified in Figure 2 through collocation bubbles.

FIGURE 2
Plant related collocation bubbles extracted from the Botanical Corpus
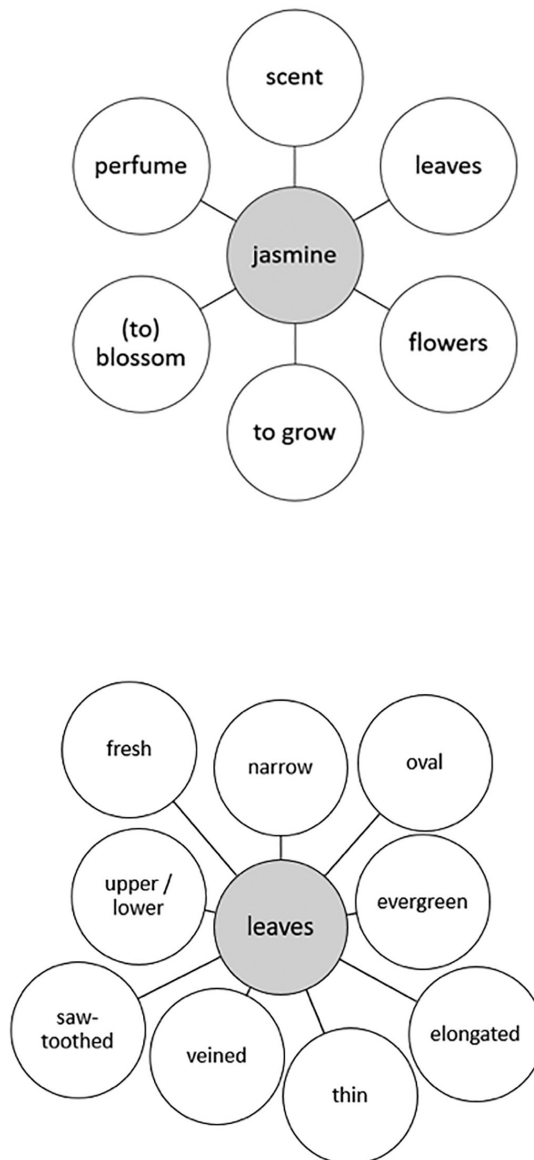
Most plants are characterised by colour. The need to describe the diverse leaves and flower nuances encouraged students to focus on colour lexicon and to deal with creative chromonyms often comprising complex compound items in English (cf. the *light-grey* leaves of the lavender, their *silver to white* down, and its *blue and violet* flowers; the *greenish-grey* colour of the wisteria trunk, the *bright green* of its leaves and the *blueish-violet* flowers that blossom in spring and summer). Colour lexicon is widely used especially in art AD because people with sight loss know the cultural meaning of colour (Giansante 2015), and colour is normally inherent to most art forms. The exposition to chromonyms through parallel texts and the active use of colour lexicon is undoubtedly a chance to intake a varied range of terms that are not used frequently in everyday language, but that are an important part of the art-related specialised lexis.

Most plants are also characterised by smell. Besides enriching the AD and improving its appeal and memorability, adding a narrated olfactory experience in the AD required the development and mastery of bilingual olfactory vocabulary on the part of the student. Every sense has its lexical field. A vast palette of specific, descriptive words exists for colours, sounds, tastes, and textures. Smell, however, seems to have been relegated to the sensory sidelines: for some, smells are inherently indescribable, for others olfactory abstraction is impossible and in fact, as Kant ([1798] 2006) wrote, smell allows itself to be described only when compared – through similarity – with another sense. This means resorting to synesthesia (cf. a smell that is *creamy*, *sweet*, *vanillary*), or to use strategies that identify a known source (e.g., something smells *like a rose*). Though odours can be difficult to conceptualise, they can be expressed in language, resorting to different strategies and lexical items depending on the language-culture (Majid and Burenhult 2014).

In the AD under analysis, not all scents were described. The ADs of the lotus and the wisteria were not integrated with an olfactory note. The scent of the wild mint was taken for granted (*Getting closer, you may smell its scent*) or referred to tautologically (*Every single part of the wild mint contains the mint-scented essential oil*). The smell of jasmine and lavender is detailed using terms belonging to the perfumery realm – the result of a detailed L1 and L2 research rather than of previous knowledge in the sector. The words used belong to abstract (therefore more emotionally-loaded) odour

vocabulary (Majid and Burenhult 2014). Most terms are evocative, uncommon and infrequent both in Italian and in English (cf. words such as *musky*, *herbaceous* and *heady*, whose frequencies according to the BNC are respectively 38, 129 and 332). As shown in Example 6, source-based descriptors are used abundantly (e.g., *floral, fruity, sugary, herbaceous, woody*), and they are accompanied by figures of speech such as synesthesia (the *oily* undertones of the jasmine) or similes (the *liquorice-like* aroma of the lavender), as well as vocabulary items denoting an evaluative experience (*slightly heady*).

Example 6)
Olfactory terms in context

Il profumo del gelsomino viene definito come leggermente inebriante, caldo e con note fruttate verdi e oleose. Generalmente l'essenza del gelsomino è molto floreale, e ricorda più il muschio rispetto all'olio essenziale.	The jasmine perfume has been described as slightly heady, warm and with oily leafy-green, fruity undertones. Usually, absolute jasmine is very floral, yet more musky than the essential oil.
L'aroma della lavanda viene definito come medicinale da un lato, e simile alla liquirizia dall'altro. Generalmente l'essenza della lavanda presenta delle note più dolci e meno floreali rispetto all'olio essenziale, con un profumo zuccherino, erbaceo e legnoso.	The lavender aroma has a medicinal note on one end and a liquorice-like one on the other end. Absolute lavender is usually sweeter but less floral than the essential oil, and offers sugary, herbaceous and woody notes.

Perfume is described to draw attention to it (blind visitors can smell it themselves), and its description is a useful addition to the whole sensory experience. Based on what theories on the impact of multimodal storage in memory claim (Moreno and Mayer 2000), we believe that olfactory language heard while smelling the described scent might leave more traces in the memory system, and therefore might function as a dispenser of more easily retrievable specialised lexis that the blind visitor can use in other contexts after memorising it. The same applies to tactile language, which has its own jargon

(e.g., *Il tronco ha una superficie* ruvida/*The trunk has a* coarse *surface*), and which again is noticed more easily and processed more efficiently thanks to the double-coding context where it occurs.

What is crucial however is that the greater chance to retain and retrieve verbal content in a dual-coding context concerns both the AD user *and* the AD writer – in this case, the student. In the former case, it can make the museum experience more accessible and memorable. In the latter case, working with L2 in a multimodal context may be conducive to incidental language acquisition.

On a concluding note, we might wonder whether the student's work, effort and choices contributed to the creation of a professional-like AD. If we compare the data of a previous corpus-based study on the language of professional museum AD (comprising professional ADs produced by VocalEyes for the British Museum; Perego 2019b) with the student's Botanical Corpus in English (Table 1), we can observe that the two corpora display similar results as far as the lexical aspects are concerned, but they differ on the level of syntax:

TABLE 1
Quantitative data

	Botanical Corpus (Colman 2020)	*British Museum Corpus* (Perego 2019b)
Word count	1462	7735
Words > 3 syllables	128 (8.8%)	650 (8.4%)
Sentence count	116	405
Average word length	4.46 (SD=2.14)	4.39 (SD=2.26)
Lexical density	55.54%	52.53%
Type/token ratio (TTR)	35.90%	51.07%
Average sentence length	12.78 (SD=5.76)	19.32 (SD=7.87)
Passive voice (% sentences)	13.79%	40.25%
Gunning fog index	8.54	11

Specifically, similar measures can be observed as far as the average word length, lexical density and percentage of complex words used are concerned. This seems to show the acquired ability of the student to be as informative as a professional describer is, and to be able to balance the type and quantity of common and peripheral vocabulary

(which emerged also from a qualitative take on the student's lexical choices). On the contrary, the higher Type/Token ratio (TTR) in the professional corpus shows that this corpus features a richer vocabulary (and therefore expected text complexity), which is possibly related to the fact that the describer was a professional mother tongue speaker, and that the corpus comprised more items to describe (18 artworks in the British Museum vs. 5 plants in the Botanical Corpus).

When it comes to syntax, we observe that the average sentence is shorter in the Botanical Corpus. This could reflect the successful attempt of the student to conform to the plain style that is typical of English (Cutts 2013) rather than to the lengthiness of the professional art ADs. A simpler style was explicitly implemented through the use of a higher number of shorter sentences compared to the Italian source text created by the student herself (Colman 2020: 36; but see note 3 as well as Bernabé and Orero 2021, and Taylor and Perego 2021 on easier audio description). Indeed, the average sentence length in the British Museum corpus was classified as "slightly above average, [...] with sentences that [exceeded] 25 words, featuring complex morpho-syntactic structures" (Perego 2019b: 339). The professional corpus is therefore quite complex and, according to the Gunning fog index, not as easily readable as the student's corpus.

A similar approach can be adopted to check whether art ADs produced by students following the same method yielded similar results. Table 2 shows that in fact other students' corpora[4] selected randomly show strong similarities with the professional corpus, although the TTR is overall slightly lower, and quite low but very similar to the Botanical Corpus (35.90%) as far as the Revoltella Corpus is concerned – a corpus that is smaller and less varied in terms of vocabulary. The lower percentage of passive sentences in all the students' corpora might be ascribed to their attempt to follow the AD guidelines scrupulously.

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[4] These are part of the Aquileia Museum Corpus, made up of the description of a selection of varied items exhibited on the first and the second floor of the recently renovated National Archaeological Museum of Aquileia. The corpus is a blend of ADs produced by two BA students (Collavini 2019; Valle 2019). The Miramare Castle and the Miramare Garden Corpora, produced by the same MA student (Biscuola 2018). Finally, the Revoltella Museum Corpus, made up of a blend of three ADs produced by two BA students (Lopedota 2017; Zordan 2017) for the important modern art gallery.

TABLE 2
Quantitative data

	British Museum Corpus (Perego 2019b)	Aquileia Museum	Miramare Castle	Miramare Garden	Revoltella Museum
Word count	7735	6833	7158	4665	1806
Words > 3 syllables	650 (8.4%)	764 (11.2%)	826 (11.5%)	520 (11.1%)	176 (9.7%)
Sentence count	405	349	350	257	98
Average word length	4.39 (SD=2.26)	4.44 (SD=2.38)	4.57 (SD=2.43)	4.52 (SD=2.42)	4.46 (SD=2.4)
Lexical density	52.53%	49.85%	52.04%	52.22%	51.38%
Type/token ratio (TTR)	51.07%	40.77%	43.89%	42.28%	37.30%
Average sentence length	19.32 (SD=7.87)	19.57 (SD=9.43)	20.46 (SD=10.33)	18.16 (SD=8.71)	18.43 (SD=7.5)
Passive voice (% sentences)	40.25%	32.09%	33.71%	29.57%	32.65%
Gunning fog index	11	12.3	12.8	11.72	11.27

Concluding remarks

AD as a form of audiovisual translation has started to be exploited pedagogically only recently, after more established audiovisual translation forms had successfully entered the translation and the second language learning contexts. Given its features and versatility, AD seems to have great and multiple potential. In fact, enriched ADs help visitors to enjoy and remember museum visits better thanks to the enhanced cognitive processes activated by multisensoriality (Moreno and Mayer 2000; Lehmann and Murray 2005), and they can help AD trainees to deal with highly specialised lexical features and textual patterns in both a comparative and translational perspective. Working with bilingual museum ADs, i.e., planning and developing them in an L1 and translating them into an L2 (English), opens up a wide didactic horizon that enables translation students to learn the theory and the practice of AD writing and of inverse translation, but also to process and retain words and structures both in their L1 and their L2. As shown in this paper, such language enhancement process is made more powerful thanks to the dual- (and sometimes multi-) coding context students find themselves involved in when they start their bilingual AD production activity.

What emerged from the works of our students was also that the AD practice is more challenging than the theory. This is primarily related to the multiple abilities required by this type of intersemiotic audiovisual translation. Furthermore, performing such a complex and comprehensive work autonomously also induced important meta reflections. These served as a useful milestone in the formation process of these students, and integrated well with the multiple skills and competences developed explicitly or implicitly during their work. The success of the activities described seems to be confirmed by the qualitative and quantitative similarity between ADs produced by the students and ADs produced by professionals (Tables 1 and 2). A similarity that encourages us to believe in the effectiveness of the learning path illustrated in professionalising university courses of translation.

The contents of this paper show just one way of using museum AD in a learning environment. We believe that AD is so versatile that it can easily be adapted to different scenarios that fall outside the academic one to comprise even primary or secondary learning environments, and L1 literacy and development.

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