

# **Populating a 3D virtual learning environment for interpreting students with bilingual dialogues to support situated learning in an institutional context**

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## **Abstract**

The point of departure of this paper is an immersive (avatar-based) 3D virtual environment which was developed in the European project IVY – Interpreting in Virtual Reality – to simulate interpreting practice. Whilst this environment is the first 3D environment dedicated to interpreter-mediated communication, research in other educational contexts suggests that such environments can foster learning (Kim, Lee, and Thomas 2012). The IVY 3D environment offers a range of virtual ‘locations’ (e.g. business meeting room, tourist office, doctor’s surgery) which serve as backdrops for the practice of consecutive and dialogue interpreting in business and public service contexts. The locations are populated with relevant objects and with robot-avatars who act as speakers by presenting recorded monologues and bilingual dialogues. Students, represented by their own avatars, join them to practise interpreting. This paper focuses on the development of the bilingual dialogues, which are at the heart of many interpreter-mediated business and public service encounters but which are notoriously difficult to obtain for educational purposes. Given that interpreter training institutions usually need to offer bilingual resources of comparable difficulty levels in many language combinations, ad-hoc approaches to the creation of such materials are normally ruled out. The approach outlined here was therefore to start from available corpora of spoken language that were designed with pedagogical applications in mind (Braun 2006; Kohn 2012). The paper begins by explaining how the dialogues were created and then discusses the benefits and potential shortcomings of this approach in the context of interpreter education. The main points of discussion concern (1) the level of systematicity and authenticity that can be achieved with this corpus-based approach; and (2) the potential of a 3D virtual environment to increase this sense of authenticity and thus to enable students to experience the essence of dialogue interpreting in a simulated environment.

**Keywords:** dialogue interpreting; virtual environment; authenticity; corpus-based approach; dialogue creation

## **1 Introduction**

In interpreter-mediated business and public service settings, communication often takes the form of bilingual dialogues. Bilingual dialogue material is therefore crucial for interpreter education and training, but access to authentic bilingual dialogues for

educational purposes is notoriously difficult, largely as a result of such dialogues taking place in confidential or private situations. To address this problem, a number of solutions have been proposed and implemented. These include creating role plays to simulate real-life situations; observing with students simulated or real-life dialogues that have been recorded; and scripting and recording bilingual dialogues. It could be argued that these solutions vary in terms of ‘authenticity’ and in terms of the learning opportunities they offer. For example, a role play may provide the opportunity to experience naturally produced spoken language to practise turn-taking management, but, depending on the role players’ expertise, may not contain many linguistic or conceptual challenges. A scripted dialogue may contain a wealth of linguistic and conceptual challenges, but may not have the ‘authenticity’ of natural spoken language. One important point to bear in mind when considering the different options, however, is Widdowson’s (1979) point that ‘authenticity’ is a function of the discourse that we construct around a text or dialogue in the process of communication and/or learning and that there are different ways of authenticating a text or dialogue, i.e. of contextualising it and making it meaningful for a learner. In relation to interpreting, it is also important to note that professional interpreters are required to authenticate a wide range of different situations as part of their work, and often in a short space of time. Trainee interpreters therefore need to develop authentication strategies. All of this suggests that each type of material and activity can add value to the learning process provided it is embedded in a suitable pedagogical framework.

Another source of variation in the different approaches is the coverage that they can provide with regard to language combinations. A recorded real-life dialogue will only be available in the language pair in which it occurred. Scripting and recording dialogues, on the other hand, is a way of creating similar material for different language pairs. The systematic coverage of a potentially wide range of language pairs is an important institutional requirement. From an institutional perspective, a solution which combines the use of authentic material and/or opportunities for authentication with a systematic coverage of the language combinations the institution offers would therefore be the most desirable solution.

The aim of this paper is to introduce and discuss a systematic approach to creating bilingual dialogues and providing a pedagogical framework for their authentication, i.e. an approach that satisfies pedagogical and institutional requirements for training in dialogue interpreting. This approach is based on the combined use of different Information and Communication Technologies (ICTs), i.e. digital corpora of spoken language as source material for creating dialogue content, and a 3D virtual environment to embed the dialogues in simulations of professional interpreting situations.

Section 2 gives a brief overview of the specific characteristics of dialogue interpreting. Section 3 outlines a template-based approach to creating bilingual dialogues, based on monolingual audiovisual corpora. The approach to pedagogical embedding the dialogues into a suitable pedagogical framework is described in

Section 4. A key step is the integration of the dialogues in a 3D virtual learning environment which simulates credible interpreting scenarios. This approach draws on the concept of ‘situated’ learning proposed by Lave and Wenger (1991) and applied to the context of translation by Kiraly (2000). It was developed and tested as part of the Interpreting in Virtual Reality (IVY) project.<sup>1</sup> The final section (Section 5) uses key insights from the evaluation of this environment to reflect on the degree of systematicity and authenticity that can be obtained with this approach.

## **2 From dialogue interpreting to bilingual dialogues for educational purposes**

Dialogues are characterised by the continual role changes of the interlocutors (speaker/listener). As a consequence, dialogue genres exhibit only a minimal degree of planning. As has been systematically observed in Conversation Analysis (Sacks, Schegloff, and Jefferson 1974), dialogues are co-constructed ‘locally’ by the participants through micro-interaction between one turn and the next. For an interpreter working in a bilingual dialogue, this entails specific tasks. In the first in-depth study of dialogue interpreting, Wadensjö (1998) has argued that dialogue interpreting has two dimensions, namely ‘translation’ and coordination/interaction. Wadensjö (2004, 121) has pointed out that interpreting in itself “is what can be called a monologising activity and needs to be explained and explored as such” but that dialogue interpreting also needs to be analysed in relation to the interactional context in which it occurs.

Mason (1999) and Wadensjö (1998) have characterised dialogue interpreting as a triadic activity or ‘pas de trois’ which has its own interactional dynamics. This has been confirmed by a number of micro-analytical studies showing that interpreters are active participants and that their actions shape the dialogue and its outcome (recently, e.g., Baraldi and Gavioli [2012]; Davitti [2013]; Niemants [2013]). At the same time, Gentile, Ozolins, and Vasilakakos (1996) have shown how the interpreter’s actions are shaped by the professional contexts – i.e. business and public service contexts – in which the dialogue is embedded.

Given the progression of a dialogue from one turn to the next, Hatim and Mason (1997) have furthermore suggested that context is the most important aspect that interpreters can make use of when they interpret a dialogue, as opposed to making more intensive use of the lexico-grammatical surface structure of speech or the textual organisation, which are more important for (unidirectional) simultaneous or consecutive interpreting respectively.

The features of dialogic communication outlined above and, indeed, the impact of these features on the role of the interpreter, suggest that interactional strategies need to be learnt and tried out. Given that interactional behaviour is highly situation-specific, it is important that trainee interpreters are exposed to a wide range of situations. Alongside this, the spontaneity of dialogue communication creates additional challenges for the interpreter, as factors such as weaker coherence, syntactic/semantic breaks and self-repairs are typical of unplanned speech. In addition to the need for a wide range of

situations to be built into the training in dialogue interpreting, the specific demands of spontaneous speech also need to be addressed.

Notwithstanding the importance of the interactional aspect and the spontaneity of much dialogic speech, the other facet of dialogue interpreting, i.e. the ‘translation’ or the ‘monologising practice’ in Wadensjö’s (2004) terms, must not be overlooked: students need opportunities for practising this aspect, too. For example, students need to be prepared for the linguistic and subject knowledge required, for the continual switching of language direction in a dialogue, as well as for the often semi-formal registers involved. An added challenge is that interpreter training institutions need approaches that cater for a potentially wide variety of language pairs. Given that interpreters working with ‘smaller’ language pairs are normally required to work across different fields to earn a living, courses in dialogue interpreting should prepare students for interpreting in business, diplomatic, legal, medical and other situations and should cater for the ‘traditional’ languages of interpreting as well as for community languages and/or languages of lesser diffusion.

The solutions for training in dialogue interpreting that have been explored in interpreter training institutions make reference to different characteristics of this form of interpreting and, although they are not necessarily all well documented in academic publications (but see Sandrelli [2001]; Niemants [2013]), it is worth considering briefly the benefits and drawbacks of different solutions here as a means of showing that such approaches are complementary to each other rather than mutually exclusive. This overview will serve to contextualise further the solution discussed in detail in this paper.

Role plays are a classic approach to practising dialogue interpreting but credible and challenging role plays can be difficult to arrange. Despite Niemants’s (2013, 317) concern that role plays are not the “real thing”, the question of authenticity may not in fact be the main problem in using role plays for dialogue interpreting practice. Given Widdowson’s (1979) point about authentication, a role play involving experts, for example, can go some way to simulating real-life conditions and becoming authentic for the students. However, the need for two role players, each speaking his/her own native language, combined with the level of preparation and/or expertise required of them to speak in enough depth for the dialogue to be credible and challenging for interpreting students, are factors that can make the approach prohibitive for many institutions. Another drawback of the role play approach is that it does not necessarily help resolve the issue of catering for many language pairs in a systematic way.

Another approach, which addresses some of these problems, is to foster the observation and analysis of dialogue interpreting practice (Davitti and Pasquandrea 2013), by observing recorded simulations or a real-life event. Going back to the roots of ethnographic approaches which also underpin the principles of Conversation Analysis, this method has a micro-analytical focus, enabling students to develop critical and reflective skills, which are also required of a professional interpreter, given that the ability to monitor and assess one’s own performance is a crucial aspect of success. Observation is, of course, a fairly passive exercise compared to role play and should be

complemented by other solutions.

In practice, the observation and analysis approach is also currently limited by a dearth of available real-life recordings (especially in institutionalised contexts), although this is not reason enough to invalidate the approach. Moreover, good simulations, which are becoming increasingly available,<sup>2</sup> also provide a good basis for an observation-based approach and discussion. Covering a wide range of language pairs is, however, a challenge for this approach as well.

A solution that addresses the challenge of coverage is the use of scripted dialogues that can be read aloud (or acted out) in class. Although such materials present neither spontaneous nor authentic speech, they can be used by trainee interpreters to work on the linguistic and subject knowledge required to interpret, i.e. in Wadensjö's (2004) terms, the 'monologising' aspect of interpreting. These materials can also be used to practise the continual switching of language direction required in dialogue situations and to develop some aspects of dialogue coordination, e.g. by trying to ensure their turns are cohesive with the previous turn. Equally important, such materials can be used to develop preparation strategies. As with role plays in which speakers ad-lib, authentication is a crucial aspect. Traditionally this would be achieved by briefing the students about the interpreting situation, but, as will be argued in this paper, communication and information technologies (ICTs) open up new opportunities here.

This paper analyses an approach that addresses the issue of authenticity as well as the need for systematic coverage of a range of language pairs. It outlines a template-based approach to dialogue creation, which combines spontaneous and scripted language to create bilingual dialogues in a systematic way, and the integration of these dialogues in a 3D virtual learning environment which enables simulation and situated learning as a way of increasing the authenticity of the learning experience. The next section will explain the creation of the dialogues themselves, whilst section 4 will outline the pedagogical framework in which they are embedded.

### **3 A template-based model for creating bilingual dialogues**

The mainstay of the approach outlined here is a suite of bilingual dialogues which are created by using segments of natural speech from spoken monolingual corpora as answer turns and scripted questions in other languages as question turns. The assumption was that this method would enable bilingual materials to be created relatively quickly and easily, while still maintaining a degree of authenticity. This section starts with a brief reflection on the type of corpus required and then considers the process involved in transforming the monolingual content into a template for creating bilingual dialogues in the multiple language pairs required.

Monolingual corpora are created for different purposes. In the field of corpus-based language learning, Tribble (1997) and others highlight the importance of topical relevance as one of the key factors for successful use of corpora with language learners. The same can be said for interpreter education: it is unlikely that interpreting students

would benefit from spoken corpora compiled for the purposes of linguistic description and analysis, whereas using corpora in which speakers talk about topics relevant to interpreting contexts can make corpora, i.e. a resource based on naturally occurring language, a very valuable resource for interpreter education (see Sandrelli and de Manuel Jerez [2007]; Bale [2013]).

In the IVY project, two such corpora, i.e. monolingual audiovisual spoken-language corpora – the ELISA<sup>3</sup> English corpus and the BACKBONE<sup>4</sup> suite of corpora in several languages – were used as the starting point for the bilingual dialogues. These corpora consist of narrative interviews with speakers from different walks of life including education, local politics, tourism, banking, environmental protection, sports and the media. The speakers were asked to talk freely about their professional lives, their projects and/or about social, cultural or political issues. They were given only short prompter questions. The speech in these interviews is best characterised as being spontaneous but thematically focussed (elicited spontaneous speech). It is semi-formal speech, exhibiting features of both monologic and dialogic speech genres. Understanding the interviews is highly dependent on the immediate situational context and/or on a degree of familiarity with the speakers. Both the thematic focus and semi-formal character of the interviews make these corpora an appropriate resource for creating bilingual dialogues for interpreting.

In the process of transforming the interviews into ‘answer’ turns for the bilingual dialogues, the first step is to extract the audio files from the video files and to remove the original prompter questions. On the basis of the content of the interview, an interpreting situation needs to be developed and a brief should be scripted to guide the creation of the new ‘question’ turns and to provide students with information about the communicative event in which the dialogue would be embedded. In the IVY project, the new ‘question’ turns were first scripted in English and inserted into or between the original answer turns.<sup>5</sup> Examples 1 and 2 and Figure 1 (below) show the steps involved in transforming a section of a BACKBONE interview into a bilingual dialogue:

### **Example 1. Extract from the BACKBONE ‘Bookshop’ interview transcript**

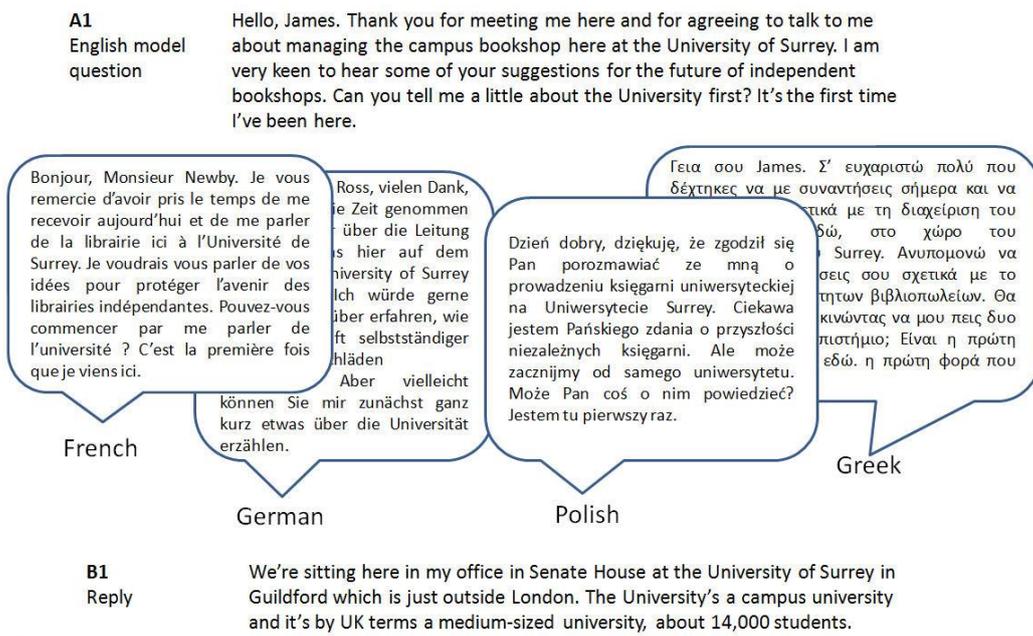
James: OK. My name’s James and we’re sitting here in my office in Senate House at the University of Surrey in Guildford which is just outside London. The University’s a campus university and it’s by UK terms a medium-sized university, about 14,000 students. The campus element is important because it means we live as a reasonably self-contained community of staff and students and- with some members of the public visiting, rather than being a university that’s based in a town and that can draw on the local facilities of a town, things like shops and restaurants and other services. So it’s very important for the services that we offer because a campus university has to offer a minimum infrastructure of services to its community. So that’s very relevant to

this.

**Example 2. Extract from the IVY ‘Bookshop’ dialogue master transcript with questions scripted in English**

A1	<i>Hello, James. Thank you for meeting me here and for agreeing to talk to me about managing the campus bookshop here at the University of Surrey. I am very keen to hear some of your suggestions for the future of independent bookshops. Can you tell me a little about the University first? It's the first time I've been here.</i>
B1	We're sitting here in my office in Senate House at the University of Surrey in Guildford which is just outside London. The University's a campus university and it's by UK terms a medium-sized university, about 14,000 students.
A2	<i>Do you think that the fact that the University is a campus university is significant in terms of retail challenges and opportunities?</i>
B2	The campus element is important because it means we live as a reasonably self-contained community of staff and students and with some members of the public visiting, rather than being a university that's based in a town and that can draw on the local facilities of a town, things like shops and restaurants and other services.

English was used as a pivot language to create a master template from which the questions could then be translated into other languages and culturally adapted wherever necessary to create bilingual dialogues in different language combinations (see Figure 1 below). The translated versions of the question turns were then audio recorded individually by native speakers.



**Figure 1. English master question with translations in different languages (Hoffstaedter 2012a: 4)**

The strategy of translating question turns scripted in English into other languages is a dynamic strategy enabling bilingual dialogues in multiple language combinations to be created from one original interview. The template-based approach can thus be used systematically to generate materials of similar content and comparable difficulty across different language combinations.

In addition, different strategies for creating bilingual dialogues using the templates were also explored. A small-scale research project involved scripting two sets of Spanish questions for the same set of English answer turns in order to create two different versions of the same dialogue (Pazos Castelos 2012). The questions in the first version were translations of the question turns in the English template (the “generic” version of the dialogue), while the questions in the second “specific version” were scripted in Spanish without making use of the IVY English template. Scripting question turns that were not simply translations of the English question turns generated Spanish question turns which can embed more complex cultural and linguistic challenges. In general, the possibility to create multiple dialogue versions from one original monolingual interview opens up opportunities for customising the dialogues to the students’ level or for addressing specific training needs.

The approach outlined here is useful in terms of creating materials systematically and in terms of fine-tuning the content to students’ needs. The combination of scripted and authentic speech mitigates some of the drawbacks of fully scripted dialogue material, and this is further supported by the semi-formal nature of the speech, which shares many features with the speech in naturally occurring dialogue. The next two sections will outline and discuss the integration of these dialogues into an ICT-

based environment with the aim of creating opportunities for situated learning and facilitating the authentication process.

#### **4 Integrating the dialogues in a 3D virtual learning environment**

One of the basic tenets of this paper is that, given the complexity of interpreter-mediated dialogues and the complementary skills, knowledge and strategies required in dialogue interpreting, training in dialogue interpreting may be most successful if it combines different approaches, ideally including observation as well as role-play and practice in real-life situations to complement classroom-based training (e.g. through internships; see, e.g., Valero Garces [2009]). Such suggestions are in line with constructivist principles of learning and especially the concept of ‘situated learning’ (Lave & Wenger 1991), which is rooted in the idea that learning should take place in professional contexts and in ‘communities of practice’. The importance of ‘situated learning’ in translator and interpreter training has been highlighted by Kiraly (2000), Sawyer (2004) and Tymczyńska (2009). However, real professional practice is not always accessible for trainee interpreters. In such situations, ICTs can offer solutions for simulating real-life practice and can offer learners a similar experience of situatedness and authenticity. In particular, the availability of 3D virtual environments makes situated learning a genuine possibility. This section elaborates on the pedagogical integration of the bilingual dialogues in a 3D virtual environment to create credible virtual interpreting scenarios. Section 4.1 outlines the main principles of this integration process, drawing on insights from research into educational uses of 3D environments. Section 4.2 explores how student engagement with this environment can be optimised through the integration of different types of learning activities.

##### ***4.1 Integrating the bilingual dialogues into a 3D virtual environment***

A 3D virtual environment is created using computer graphics to imitate or simulate aspects of the real world. Their simulation capabilities have made 3D environments popular in educational contexts (see Kim, Lee, and Thomas [2012] for a recent overview). Multiple-user 3D ‘worlds’ which allow users to interact with the environment and with other users through virtual representations of themselves (avatars) are in particular considered to be engaging environments that foster situated learning (cf. e.g. Calongne 2008).

The 3D virtual environment discussed in this section has been implemented as a ‘virtual island’ in the 3D world Second Life (SL) (for a detailed description see Braun et al. [2013] and Ritsos et al. [2012]). SL is a public-facing 3D world<sup>6</sup> providing a graphically and functionally rich environment. Whilst the virtual space needs to be rented and incurs costs on the part of those who maintain the space, basic membership for individual users is free of charge. An initial analysis of this environment and its interactional features in the early stages of the IVY project revealed the potential of the environment for simulating professional interpreting practice (Braun and Slater 2011).

SL comes with ready-made and modifiable landscapes, buildings, rooms, furniture items and other spatial objects as well as characters which can be controlled by users (avatars) or by the environment (robots). It is possible to incorporate links to websites (e.g. on virtual screens) and to stream audio and video files into the environment. Users (i.e. their avatars) can move around in, and interact with, this environment. They can, for example, walk, fly, teleport from one virtual location to another, change their appearance and clothing, start animations and simulations, pull up different media on screens or boards, etc. They can also interact with other users through various forms of public and private voice and text chat. This means that different scenes in which interpreters work can be created, e.g. a meeting room with relevant furniture and robots representing the interlocutors, and the audio of the bilingual dialogues can be streamed into the 3D space to create the impression that the robots speak to and interact with each other. The interpreting student can access the scene with his/her avatar, play the dialogues and practise interpreting.

In terms of the architectural design of such an environment, the first point to be considered are the spaces where dialogue interpreting takes place, what is characteristic of these spaces and how this can be ‘translated’ into appropriate virtual locations. Research investigating the relationship between student satisfaction from 3D virtual learning environments and their individual design components and architectural features suggests that architectural “design elements of 3D educational facilities [...] have an impact on students” (Saleeb and Dafoulas 2010, 86). The design and appearance of the virtual world are particularly important when the aim is to simulate professional practice in a credible way. Moreover, given the highly context-specific nature of interpreter-mediated dialogues, the virtual locations should present genuine settings in which an interpreter would work. At the same time, the locations need to strike a balance between being generic enough to be used with a range of different materials and being specific enough to provide credible settings for the materials, and between being culture-specific and reusable for presenting material in several languages or language combinations. This is an important consideration in terms of the sustainability of the environment. In the IVY project, the selection and design of the virtual locations was guided by the content of the available bilingual dialogues and the interpreting situations in which these are embedded (as described in the interpreting briefs).

Furthermore, it was deemed insufficient to develop simply a range of ‘disjointed’ virtual locations. In order to create situational awareness for the procedures in which an interpreting assignment takes place in real life (arrival, meeting the client, introduction, etc.), the virtual locations are embedded in a Visitor Centre with a reception area, which is the default ‘landing place’ for students (avatars) accessing the virtual island. Figures 2 and 3 below show the Visitor Centre and some of the scenes created in the IVY project.



**Figure 2. Virtual interpreting scenarios – IVY Visitor Centre reception and office-style set-up**



**Figure 3. Virtual interpreting scenarios – meeting room (l) and tourist office (r) with robots**

As pointed out earlier in this paper, interpreter-mediated dialogues tend to be situation-specific and shaped by the professional contexts in which they take place. The visual cues in each scenario reflect such differences, not only by using characteristic spatial objects, but also by mirroring different seating arrangements, for example to create a sense of proximity to, or distance from, the speakers. Moreover, each location offers different seating options for the student's avatar. The student can try out different positions to discover what s/he would see from each place and reflect upon the appropriateness of each, e.g. in relation to the interlocutors. Whilst users in the 3D

environment normally see their own avatar from behind (as shown in Figure 2), they can also choose to see the environment through their avatar's eyes. In the interpreting situation, this provides an additional 'layer' of authenticity to the dialogue.

In order to simulate the bilingual dialogues in the 3D world, a number of features have been added to the IVY environment in SL. Each dialogue was assigned to one of the virtual locations, and a Heads-Up Display, i.e. a type of menu-driven dashboard, was created to enable the students to select relevant dialogues by language combination and topic, to access the briefing, and to teleport to the location in which the dialogue is situated. Furthermore, the environment is critically underpinned by an administration panel to add content and manage users (for details of the technological infrastructure of IVY, see Ritsos et al. [2012]).

Another important question is how the audio of the dialogues should be presented. On the one hand, prior pilot studies (in the LLP project BACKBONE, see section 3) indicated that interpreting students preferred audiovisual material to pause automatically at a useful point rather than having to pause the sound/video while trying to focus on the content and the interpretation. Chen and Ko (2010), who designed an online conference interpreter testing platform, come to similar conclusions. On the other hand, Hansen and Shlesinger (2007) emphasise the importance of practising self-spaced consecutive interpreting, because turn-taking management is an important skill of an interpreter and it also includes the ability to intervene at an appropriate point in order to deliver an interpretation. Given these different, overlapping functional requirements, the IVY audio player, which was also added to the IVY 3D environment, was designed to provide some flexibility and to enable students to simulate, as far as possible, some of the interactional dynamics in a real-life dialogue. As a default, the student listens to a turn until it finishes, interprets the turn, and then calls up the next turn. However, the student can also pause the audio within a turn at any time and repeat a turn or part of a turn (see Ritsos et al. [2012]). The option to replay turns requires reflection, on the part of the student, about how the 'repetition' of a speaker's turn in interpreter-mediated communication would happen in real-life situations. Such issues are indicative of the guidance that students working in this environment will need. We will return to this in section 4.2.

As a final point, it should be mentioned that SL currently places a number of constraints on the implementation of an 'ideal' training environment. Many of them are problems of scale. The range and/or multiplication of the virtual locations, for example, is limited by the number of building blocks available on a virtual island. Given that the rental price for a SL island is high, this places some restrictions on the number of scenes that can be created and/or on the detail that can be included in the scenes. Furthermore, the audio playback of the dialogue is a locally controlled process, meaning that it is currently not possible for peers or tutors to be present and listen to a student's interpreting practice (they would hear the student's renditions only, via voice chat). Although the audio playback is of good quality, it is currently not possible to synchronise the audio and the movement of the robots. This means that the interlocutors

in the dialogue cannot produce any co-speech gestures or facial expressions, i.e. the puppet interlocutors appear as rather static.

Despite these limitations, the integration of the dialogues in virtual scenes constitutes a novel way of situating such materials with the help of emerging ICTs. The development of 3D virtual environments is still in its early days, but when current limitations can be overcome, this is a platform worthy of serious consideration for situated learning. By simulating the professional interpreting context in which each dialogue is situated, the 3D environment adds value to training material that would be limited in its use as a stand-alone resource. This process of pedagogical embedding can be optimised further by enriching the dialogues with additional pedagogical material, which is the focus of the next section.

#### **4.2 Pedagogical enrichment of the dialogues**

The need for guiding the learners in using the 3D environment and the digital content was highlighted in the previous section. As well as their integration into the bespoke 3D virtual environment, the dialogues were therefore also enriched by adding an interpreting brief to each of them and creating learning activities to accompany them to make sure the students can unleash the full potential of the material: *preparatory* learning activities were created to guide students in preparing for the interpreting assignment; *skills-based* learning activities focus on the training and practice of discrete interpreting skills such as source text comprehension, memory training, note-taking and target text production; and *reflective* learning activities show students how to reflect on their interpreting practice with a bilingual dialogue and their interpreting performance.

In the preparatory learning activities, students are guided through working with the interpreting brief, carrying out subject-related background research, and researching words, terms and phrases. The students' attention is drawn to *what* they need to research and *how* they can carry out the research (e.g. by providing links to relevant websites, including links to the BACKBONE search site from which the narrative interviews that form the basis of the bilingual dialogues are taken; see Hoffstaedter [2012b]).

Preparatory activities were created for selected dialogues which direct students to resources and approaches that are relevant to the topic and content of these dialogues. These specific preparatory activities provide examples of how to prepare for a specific assignment and these can be expanded according to each institution's needs and available resources. However, in line with the aim of creating resources efficiently, a set of generic preparatory activities which could be used with any of the bilingual dialogues that are currently in the resource pool (and with other similar dialogues) was also created.

As another strand of the pedagogical embedding of the bilingual materials, reflective activities were created for interpreting students to reflect on their practice with the dialogues and on their interpreting output. As with the preparatory activities, generic reflective activities were created for use with any of the bilingual dialogues, involving such tasks as reflecting on the preparation for the assignment and on interpreting

performance, while specific reflective activities seek to draw attention to the interpreting challenges inherent in individual dialogues and to encourage students to reflect on how they handled these challenges in their interpretations.

To ensure that the dialogue-specific reflective activities are useful for all language combinations in which a dialogue exists, the reflective activities are based on the answer turns. Because students use the same set of answer turns in different language pairs (i.e. with different sets of question turns; see section 3), the focus is on the answer turns and the challenges that arise from these as source texts for interpreting. A range of potential challenges was considered including, for example, information density, memory load, lexical and terminological difficulties, weak coherence, complex utterance and structures, and the delivery of the source text (pace, accent, etc.; see also Braun & Kohn [2012]).

The reflective activities for each given dialogue are made up of a number of different tasks, each focusing on a section of a turn or a complete turn, and the interpreting challenge(s) therein. Students are expected to listen to the dialogue again after completing their interpreting assignment and to reflect upon their interpreting solutions. Some answer turns contain a number of different interpreting challenges, which are incorporated into one task, as shown in Example 3:

**Example 3. Multiple challenges in one answer turn from the reflective exercises of the ‘Fairtrade’ dialogue**

Turn 11
So instead of giving them handouts which aren't necessarily used in the right way, or it's very difficult to <i>control</i> how they're used, if you encourage them to produce things and become productive, but on the other side of the coin, if you pay them a reasonable rate for doing that, then you get both economic development in countries where it's really needed, and you avoid the risk of exploitation where from wealthy-wealthier developed countries where that risk exists.

***Asides – extracting the main points of an utterance***

What do you think were the main points of this turn? If you made notes for this section, how did you note down the main point(s)? Did you note the asides too? If so, how did you note these in addition to the main points? Is it clear from your notes which are the main points and what is an aside? If not, how could you improve your notes to aid retrieval and recall?

***“on the other side of the coin”***

The speaker also uses the expression “on the other side of the coin”.

What function does this phrase have? Do you understand what this expression means? How did you deal with this in your interpretation?

### *Self-repairs*

The speaker corrects himself here: “wealthy” → “wealthier”. Why do you think the speaker does this? How did you deal with this correction in a) your notes and b) your interpretation? How would you assess your solution?

As mentioned in section 2, one drawback in the use of recorded materials for dialogue interpreting practice is that it is difficult, even impossible, to replicate the conditions where trainee interpreters can practise managing the interaction between participants and coordinating the communication. As a way of addressing this possible shortcoming, issues such as interaction and communication management can be incorporated into the reflective activities. The activities can, for example, raise students’ awareness of the co-construction of meaning in dialogues from one turn to the next and of the fact that different ways of rendering a speaker’s idea could trigger different responses and could thus cause the dialogue to take a different direction.

## **5 Discussion**

The premise of the IVY project, on which this paper is based, was to develop a pedagogically sound solution for training in dialogue interpreting that exploits the potential of ICTs to foster situated learning and the students’ ability to authenticate or contextualise the learning content as much as possible. It has been argued that a solution which combines the systematic development of digital content and its integration into a bespoke virtual learning solution responds to institutional needs for a flexible and potentially large pool of resources.

The template-based approach to the creation of learning content, combining natural and scripted language to create bilingual dialogues, has been shown to resolve some aspects of dialogue interpreting training and resource creation that other approaches may not be able to solve. It has furthermore been argued that the use of a 3D virtual world can increase the situatedness and authenticity of the dialogues, and that learning activities can not only encourage reflection upon the dialogue interpreting practice but also raise awareness for the interactional aspect of dialogue interpreting, which is more difficult to simulate than other aspects.

In the IVY project, an evaluation phase was conducted with interpreting students at the University of Surrey and other IVY project partner sites to obtain initial feedback on this solution (see Braun et al. [2013] and Tymczyńska et al. [2013] for more detailed reports). The evaluation feedback highlighted a number of interesting aspects, which will be discussed in this section.

In line with previous research and with the aim of simulating professional practice, the design and appearance of the virtual world was assumed to be particularly important in the interpreting context. Feedback from students suggests that the bespoke learning environment with functional features that are geared towards simulation and the practice of dialogue interpreting can add value to their practice. What emerges clearly in the student feedback is the link between the task at hand, the design and functionality of the 3D environment, and the content with which it is populated (in line with findings in e.g. Peachey [2010]; Saleeb and Dafoulas [2010]).

This also leads to the question of ‘realism’. Some students compared the IVY environment unfavourably with other ICTs, especially video clips, which were used successfully for dialogue interpreting practice e.g. in the training solution reported by Hansen and Shlesinger (2007). The technology underlying the 3D environment has arguably a higher simulation potential than video clips (although the two technologies are merging, e.g. to create ‘augmented reality’), but whilst many objects in current 3D worlds, such as buildings, furniture and backdrops, have become more photorealistic over the past few years, the SL environment does not yet offer sufficient support for gestures and facial expressions, especially co-speech gestures and expressions. This is particularly important in light of the recent research by Ang et al. (2013) which suggests that ‘behavioural realism’ (i.e. how a robot or avatar mimics gestures) may be more important than ‘form realism’ (i.e. how photorealistic the robot or avatar is), and which may to some extent explain the students’ reactions.

Another finding from the evaluation also points to a possible lack of appreciation of the 3D capabilities. Two of the students, for example, commented that they would be content with the audio files of the dialogues. This suggests a ‘narrow’ understanding of the task of dialogue interpreting, i.e. an understanding that is mainly focused on the linguistic-semantic aspects and the ‘translation’ aspect, whereas research into dialogue interpreting, as outlined in section 2, has repeatedly demonstrated that this view of a dialogue is not sufficiently comprehensive. An interesting lesson that emerges from this with regard to situated learning is that situational awareness is a prerequisite for situated learning to be successful. It once again draws attention to the necessity of blending different educational opportunities, including visits to real-life environments where interpreters work, internships and exposing students to real-life data where available.

Of course, the use of the 3D world was not without problems for the students. Most of this seems to be due to the novelty of this type of environment. Being fundamentally different from more traditional online learning environments (e.g. course management systems, video repositories), the 3D virtual environment was completely outside the range of ICTs and media that students were used to using.

There is debate in the educational literature about how much induction students need to such environments but when a sufficient level of familiarisation with the technology and situational awareness are achieved, the 3D environment and the presence of robots with which the students can interact make this approach similar to

live role plays in some ways. Although this paper has focused on an approach based on ‘constructed’ dialogues, an interesting point is that the 3D environment can also be used for live role plays.<sup>7</sup> This again points to one of the most important features of 3D environments, i.e. the wealth of opportunities for synchronous communication and interaction that they offer and that has been shown to have positive effects on the learning process (see Wills, Leigh, and Ip [2011] for an overview).

Whilst the ‘constructed’ dialogues, along with peer or group observation and reflection, could be used more extensively in the initial phases of dialogue interpreter training, live role plays could be used when the students have a greater level of autonomy and have gained an understanding of what they need to do to prepare and act out their own role play situations. It is also conceivable that students could contribute to shaping the 3D environment, i.e. by selecting and implementing objects that are required by a situation, or by positioning chairs or other furniture to create a suitable set-up, as a way of raising awareness for the situational aspects of interpreting.

The approach set out here could furthermore be refined by including a greater variety of settings, especially public service interpreting (PSI) settings. In relation to some of those settings, the requirements for simulated environments are high, as PSI situations often depend on detail (the size and layout of a police interview room, for example) and are often highly culture-specific. However, as 3D virtual environment technology is maturing, the “deep sense of environmental and conditional immersion for multiple users afforded by virtual worlds” (Kim, Lee, and Thomas 2012, 3) should provide a fruitful basis for simulating the more challenging settings of PSI in the mid-term.

## **6 Conclusions**

The aim of this paper was to outline a sustainable approach to education and training in dialogue interpreting that can overcome some of the current problems in this area, especially the dearth of comparable bilingual content for several language pairs, and one that fosters situatedness and authenticity in the students’ practice of dialogue interpreting. A template-based approach to dialogue creation and its advantages, as opposed to a scripting-only approach, has been outlined. Given the prevalence of spontaneous speech in dialogue communication, and consequently the need for such speech in training materials, the approach taken here allows at least parts of the constructed dialogues to be formed of naturally spoken language. The ‘answer’ turns in the dialogues are extracted from existing monolingual corpora of naturally spoken language and therefore contain the features of spoken language that are difficult or even impossible to replicate in scripted recorded dialogues. The ‘question’ turns, meanwhile, are scripted and, although they may be less authentic, they can be adapted to accommodate specific training needs.

Secondly, the paper has discussed the integration of the dialogues in a 3D virtual world that provides thematically appropriate virtual locations with the aim of increasing

the sense of authenticity. The potential of 3D worlds for simulation as well as current limitations have highlighted.

A final point is the importance of variety and complementarity in the methods used to provide training for dialogue interpreting. A major advantage of showing students different approaches to learning how to interpret dialogues (such as observing live dialogue interpreting or video clips or working with the approach outlined in this paper) is that students are exposed to many different examples, ideas and suggestions. As students progress in their training, the range of methods will help them develop autonomy, and they will become more capable of shaping their own dialogue interpreting practice. Moreover, if such an eclectic approach includes the use of new ICTs, appropriately integrated with a clear pedagogical purpose, it is likely that students will also develop a certain degree of autonomy in the use of digital technologies. This is a not insignificant by-product of contemporary interpreter training in light of the changes to the landscape of the interpreting profession and the advances made in remote interpreting (see Braun and Taylor 2012) which make familiarity and experience with digital technologies an important skill for practising interpreters.

## Notes

- <sup>1</sup> EU Lifelong Learning Programme project 511862-LLP-1-2010-1-UK-KA3-KA3MP; co-ordinator University of Surrey, UK ([www.virtual-interpreting.net](http://www.virtual-interpreting.net)); with financial support from the European Commission.
- <sup>2</sup> See for example the EU-funded projects IMPLI and Building Mutual Trust 2, both focusing on legal interpreting.
- <sup>3</sup> English Language Interview Corpus as a Second-Language Application. The development of the ELISA corpus was supported by a young researcher grant (S. Braun), University of Tübingen 2003-04; <http://www.corpora4learning.net/elisa>); see Braun (2006, 2010).
- <sup>4</sup> BACKBONE (European Lifelong Learning Programme project 143502-LLP-1-2008-1-DE-KA2-KA2MP, 2009-10; co-ordinator: University of Tübingen, Germany; [www.uni-tuebingen.de/backbone](http://www.uni-tuebingen.de/backbone)); with financial support from the European Commission; see Kohn (2012).
- <sup>5</sup> Note that ‘question’ turns were not necessarily questions but could also be comments made by the speaker.
- <sup>6</sup> Second Life was developed by Linden Research Inc® and launched in 2003 ([www.secondlife.com](http://www.secondlife.com)). It had 30 million registered users in July 2012 (<http://www.gridsurvey.com>).
- <sup>7</sup> The EVIVA (Evaluating the education of interpreters and their clients through virtual learning activities) project is currently conducting an evaluation of several virtual learning environments – including 3D and videoconference-based environments – to analyse their affordances for supporting interpreting students in working with ready-made bilingual content and in conducting live role plays.

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interpreting.net)]. This paper reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

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