Slide 1

Interpreter Education in an Avatar-based 3D Virtual World

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Slide 2

Background

IVY - Interpreting in Virtual Reality

EVIVA - Evaluating the Education of Interpreters and their Clients through Virtual Learning Activities

Project partners:

University of Surrey (co-ordinator, UK)
Uniwersystet im. Adama Mickiewicza (Poland)
University of Cyprus (Cyprus)
Steinbeis-Transferzentrum Sprachlernmedien (Germany)
Bangor University (UK - Wales)
Eberhard Karls Universität Tübingen (Germany)
Bar-Ilan University (Israel)

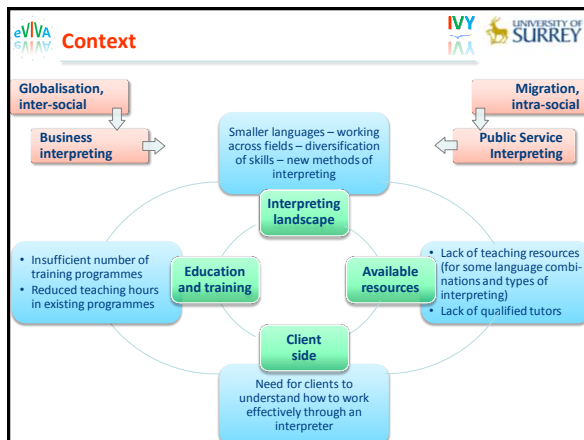Website: www.virtual-interpreting.net

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Slide 3

This presentation

Aims

- Introduce and contextualise the IVY 3D environment
- Examine the affordances of 3D environments for simulating interpreting practice
- Discuss the support that such environments can provide for individual and collaborative learning
- Evaluate our solution to date

Slide 4

Context

- Globalisation, inter-social
- Business interpreting
- Migration, intra-social
- Public Service Interpreting
- Smaller languages – working across fields – diversification of skills – new methods of interpreting
- Interpreting landscape
- Insufficient number of training programmes
- Reduced teaching hours in existing programmes
- Education and training
- Available resources
- Lack of teaching resources (for some language combinations and types of interpreting)
- Lack of qualified tutors
- Client side
- Need for clients to understand how to work effectively through an interpreter

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Slide 5

Context

Recommendations

- SIGTIPS (European Language Council Special Interest Group on Translation and Interpreting for Public Services):

  The lack of tutors and resources…

  "may be addressed by resorting to new technologies allowing for the creation of a **virtual learning environment**" to "make training possible irrespective of location or geographical distance between trainers and trainees" (2011: 18)

  The staff of Public Service Providers…

  "should be **trained to work with interpreters**" (2011: 22)

  Whenever appropriate…

  "**remote teaching and learning facilities** should be put in place" (2011: 22)

Slide 6

Context

Pedagogical principles

- Social constructivist approaches to learning – learning as a cognitive and social activity

  ➢ role of social interaction and participation (Vygotsky 1978, Wenger et al. 2002; Kiraly 2000)

  ➢ role of 'social presence' (Tu 2002), esp. in virtual environments

- **Authenticity and contextualisation**
- **Situated learning**
- **Individual and collaborative learning**
- **Autonomy**

Slide 1: Context

Context

3D Virtual Learning Environments

Initial assumptions – what can they offer for interpreter training:

- Options for participation, immersion, simulation and interaction
- Media-rich and user-created content
- 'Augmented' capabilities (exploration from different perspectives)
- Preparation for future professional practice (digital literacy)

→ **Satisfy social and cognitive constructivist principles**

→ **IVY: an avatar-based multi-user 3D virtual environment to simulate interpreting practice**

→ based on successful prior uses in different educational contexts (e.g. Calongne 2008, Collins 2008, Peachey et al. 2010, Savin-Baden et al. 2010)

Slide 2: IVY: Interpreting in Virtual Reality

IVY: Interpreting in Virtual Reality

The virtual world

- A virtual island and scenarios: the 3D space with buildings and other objects
- Avatars & robots: user/speaker representation
- Tools, incl. HUD, voice chat, audio player etc.: simulation and practice

(Braun et al. 2013, Ritsos et al. 2013)

Slide 3: IVY: Interpreting in Virtual Reality

IVY: Interpreting in Virtual Reality

Practice with prepared material
→ **Individual learning**

Slide 4: IVY: Interpreting in Virtual Reality

IVY: Interpreting in Virtual Reality

Practice with prepared material
- Monologues and bilingual dialogues based on spoken corpora, (BACKBONE and ELISA corpora)
→ **Authenticity**

Slide 5: IVY: Interpreting in Virtual Reality

IVY: Interpreting in Virtual Reality

Practice with prepared material
- Embedded in virtual scenarios, with robots as 'speakers'; briefings for interpreting practice
→ **Situated learning**

Slide 6: IVY: Interpreting in Virtual Reality

IVY: Interpreting in Virtual Reality

German–English dialogue between a journalist from Germany and the Director of Trading of the University of Surrey. The journalist is writing an article about the concept of 'fair trade' and has come to the University of Surrey to talk to the University's Director of Trading about the University and about the University's Fairtrade status.

IVY: Interpreting in Virtual Reality

Live role play
→ **Collaborative learning**

IVY: Interpreting in Virtual Reality

Live role play
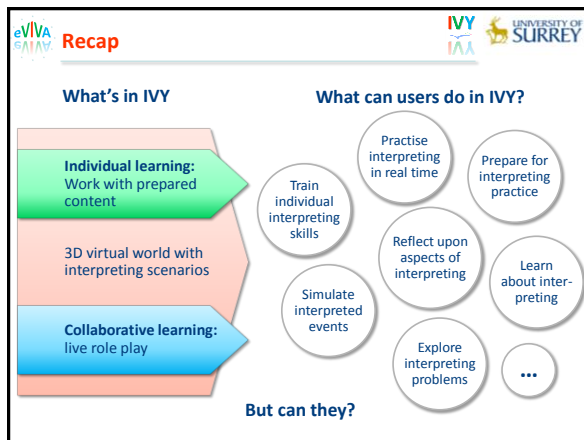- Live interaction with others, including potential clients
→ **Authenticity**

IVY: Interpreting in Virtual Reality

Live role play
- Simulation of interpreter-mediated events
- Embedded in virtual scenarios
→ **Situated learning**

Recap

What's in IVY

- **Individual learning:** Work with prepared content
- 3D virtual world with interpreting scenarios
- **Collaborative learning:** live role play

What can users do in IVY?

- Train individual interpreting skills
- Practise interpreting in real time
- Prepare for interpreting practice
- Reflect upon aspects of interpreting
- Learn about inter-preting
- Simulate interpreted events
- Explore interpreting problems
- ...

But can they?

Evaluating the IVY environment

Challenges

- How to evaluate whether the VLE helps achieve this, i.e. how to isolate the contribution of the VLE? (see also Hansen & Shlesinger 2007)
- **Complementarity problem**: blended learning – learning success emerges as a combination of all activities/resources
- **Time factor**: learning takes time – difficult to observe and evidence
- **Ethical/practical difficulties**: experimental design – hard to achieve in practice and ethically problematic in student group

→ **Multidimensional evaluation, mixed methods**

Evaluating the IVY environment

- **Functional dimension**: does the system design support the learning – as a prerequisite
  - Academic debate: how much is needed
  - Sense of presence
  - Usability, user experience ('would you recommend it…')
  - But: do learners know what is good for them
- **Pedagogical dimension**
  - Evaluating the product (what has been learnt) – not helpful here, given the problems with isolation
  - Evaluating the process – how do learners interact with the environment in the pursuit of their aims – i.e. do we see evidence that the environment supports the stated pedagogical principles

Evaluating the IVY environment

- **Walkthroughs and interpreting sessions**
  - ➢ Screen capture to document the sessions
  - ➢ External recording to capture human-computer interaction
  - ➢ Observation of participants
- **Surveys**
  - ➢ *Usability questionnaire* (standardised questionnaire)
  - ➢ *User experience questionnaire* (standardised questionnaire)
- **Introspection**
  - ➢ *Thinking aloud:* students and trainers verbalised their thoughts during the walkthroughs, i.e. while navigating the environment
  - ➢ *e-Diaries*: students described how they worked with the environment, focus on prepared content
  - ➢ *Reflective sessions*: students and researchers watch and discuss interpreting sessions

Evaluating the IVY environment

- **Corpus-based methods of analysis**
  - ➢ Identification and annotation of source text challenges in the prepared content – analysis of students' strategies
  - ➢ Multiple parallel corpora of student performance (also comparing performance in different learning environments)
- **Learning/Discourse analytics:**
  - ➢ In relation to learning with prepared content: handling of challenges (see above)
  - ➢ In relation to collaborative learning, analysis of the communicative interaction in the role plays
- **Basic visual analytics**
  - ➢ To gain a better understanding of the data, to correlate data sets and help with analytic reasoning.
  - ➢ E.g. timelines of the student activity sessions (also in different learning environments)

Evaluating the IVY environment

"It was two-way consecutive interpreting… The aim of the session was to explore the IVY environment… My goal was also to improve my output, … I tried to produce a fluent and accurate version in both languages." (First-time user)

"I listened to some English dialogues and monologues which cover various subjects… Although I met some technical issues when first using it, I am now having a skillful command of it."

"It was helpful [practising interpreting] in Second Life because the clips were short and allowed us to practise, think and rephrase."

Evaluating the IVY environment

"I had quite a few attempts getting on the island. At first, seeing other people was distracting… I haven't got to grips with the island yet."

"It makes the experience more real. You can immerse yourself in the environment."

"It is not easy to substitute physical presence with electronic means; I am more concerned about just having good audio control and play functionality instantly available rather than graphics and personalisation, environment."

Evaluating the IVY environment

- **Real learners**
  - ➢ *Are not necessarily "autonomous" (and digitally savvy)*
  - ➢ Learner autonomy does not mean "on their own" (Little 2007).
  - ➢ Rather, "the ability to take charge of one's learning" (Holec 1981).
  - ➢ It develops in stages.
  - ➢ It needs to be guided.
- **Virtual worlds**
  - ➢ *Can be overwhelming, chaotic and distracting* (Carr *et al.* 2010).
  - ➢ Students need to "buy in" to the virtual world experience (Moscato and Moscato (2009), but learning curve/"pain barrier" is high (Carr et al. 2010).
  - ➢ The 3D world must become sufficiently "real" to enable "authentication" (Widdowson 2003) and a sense of presence.

Evolution of the environment

First generation

Second generation

Third generation

Third generation

Last but not least...

IVY - Interpreting in Virtual Reality (2011-12)

EVIVA - Evaluating the Education of Interpreters and their Clients through Virtual Learning Activities (2013-14)

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IVY and EVIVA have been co-funded by the European Commission. This presentation reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.