Evaluating the IVY 3D virtual environment with interpreting students and trainers

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Background

IVY - Interpreting in Virtual Reality

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

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Aims

• Introduce and contextualise the IVY 3D environment
• Explain and discuss the evaluation methods
• Give outlook of further development of the environment

• Next presentation:
  Evaluation results
Context

Globalisation, inter-social

Business 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

• Lack of teaching resources (for some language combinations and types of interpreting)
• Lack of qualified tutors

Available resources

Client side

Need for clients to understand how to work effectively through an interpreter

Migration, intra-social

Public Service Interpreting
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)
Pedagogical principles

- Social constructivist approach to learning – learning as a cognitive and social activity; role of social interaction and participation (Vygotsky 1978, Wenger et al. 2002; Kiraly 2000)
- Authenticity
- Autonomy
- Blended Learning
- Situated learning
- Collaborative learning
Scope of current ICT solutions

Uses of Information and Communication Technologies (ICTs) in interpreter training:

- **Digital audiovisual content**: material collections, spoken language corpora (e.g. Bendazzoli & Sandrelli 2005, Braun 2010, Hansen & Shlesinger 2007, Seeber 2006; EU Speech Repository)

- **Content and bespoke functionality**: computer-assisted interpreter training packages – CAIT (e.g. Sandrelli 2007, Sandrelli & de Manuel Jerez 2007)

- **Content + functionality + remote interaction facilities**: online learning platforms/environments (e.g. Tymczyńska 2009; Virtual Classes)

→ Mostly satisfy the cognitive constructivist principles
**Context**

**‘New’ generation ICTs**

New generation ICTs such as 3D virtual environments offer:

- 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 cognitive constructivistic principles

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

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

- An island on the ‘grid’: the virtual space
- Avatars & robots: user/speaker representation
- Scenarios & tools: simulation and practice
- How real is virtual: ‘sense of presence’

(Braun et al. 2013, Ritsos et al. 2013)
Practice with prepared material

- Monologues and bilingual dialogues based on spoken corpora, (BACKBONE and ELISA corpora)

→ ‘Authentic’ content
Practice with prepared material

- Briefings for interpreting practice
  → Autonomous learning
IVY: Interpreting in Virtual Reality

Practice with prepared material

- Embedded in virtual scenarios, with robots as ‘speakers’; user-controlled audio player

→ Situated learning
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
- Live interaction with others, including future clients
- Simulation of interpreter-mediated events
- Embedded in virtual scenarios
  → Collaborative learning
Recap

**Pedagogical principles**

- Authenticity
- Autonomy
- Blended Learning
- Situated learning
- Collaborative learning

- Thought to help simulate real-life experience, empowering the student to take charge of their own learning and to achieve key learning aims
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
Evaluating the IVY environment

Multidimensional evaluation

• **Overarching aim**: evaluating learning achievement

• **Functional dimension**: does the system design support the learning – as a prerequisite
  - Academic debate: how much is needed
  - Sense of presence
  - Usability (‘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

Phase 1 (IVY 2011-12) – mixed methods

- Introspective methods
  - *Walkthroughs*: participants (students and trainers) verbalised their thoughts while navigating the environment
  - *e-Diaries*: participants (students) described how they worked independently with the environment, focus on prepared content

- Observation of participants (students/trainers)
  - during the functional evaluation (walkthroughs) only

- Interaction with participants
  - *Individual discussions w. students/trainers* during/after walkthroughs
  - *Discussion in tutorials* with students after their work with the environment

- Questionnaires
  - *Usability* (standard questions from system design)

More in the next presentation
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

Phase 2 (EVIVA 2013-14)

• Further evaluation: (even) more emphasis on learning processes
  ➢ Prepared content and role plays
  ➢ Role plays as advanced autonomy

• Further development: focus e.g. on sense of presence
  ➢ Advances in 3D virtual environment technology