Studying pedagogical interactions in synthetic worlds
Aurélie Bayle, Anne-Laure Foucher

▶ To cite this version:
Aurélie Bayle, Anne-Laure Foucher. Studying pedagogical interactions in synthetic worlds. EUROCALL 2011, Aug 2011, Nottingham, United Kingdom. <edutice-00583506v2>

HAL Id: edutice-00583506
https://edutice.archives-ouvertes.fr/edutice-00583506v2
Submitted on 10 Oct 2011

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L’archive ouverte pluridisciplinaire HAL, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d’enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.
Studying pedagogical interactions in synthetic worlds

A. Bayle & A.-L. Foucher

Laboratoire de Recherche sur le Langage, Clermont-Ferrand

http://lrlweb.univ-bpclermont.fr/

Publications: http://hal.archives-ouvertes.fr/LRL

EUROCALL 2011, 31st August – 3rd September, Nottingham
What is a synthetic world?

- « a synchronous, persistent network of people, represented as avatars, facilitated by networked computers » Bell (2008: 3)
- Affordances for language learning (Dalgarno & Lee, 2010: 11; Educause, 2006: 2; Avalon, 2010: 5; Armitt et al., 2005...)

![Image of a synthetic world scene with avatars]
Interactions within synthetic worlds

- Multimodal: synchronous interactions through different modes available in the environment, used simultaneously or not

<table>
<thead>
<tr>
<th>Modes</th>
<th>Functions / Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textual</td>
<td>Chat, notecards, boards…</td>
</tr>
<tr>
<td>Oral</td>
<td>Audio</td>
</tr>
<tr>
<td>Gestual</td>
<td>Gestures</td>
</tr>
<tr>
<td>Spatial</td>
<td>Movements</td>
</tr>
<tr>
<td>Actionnal</td>
<td>Interactions with objects / environment</td>
</tr>
</tbody>
</table>
What kind of data and how to collect it?

- LETEC Corpus (Chanier & Ciekanski, 2010)
  - Verbal interactions
    - Chat
    - Audio
    - Video
  - Observation
  - Movement tracking and interactions with objects
  - Questionnaires / interviews
  - Other elements (learning scenario, research protocol, licenses, analysis...)
Background 1

- Second language acquisition research
  - Qualitative
  - Understanding
  - Action research
  - Semi-experimental research

- Synthetic worlds (*Second Life*)
  - Interest for language learning (Henderson et al, 2009)

- Online pedagogical interactions
  - Technological mediatisation and human mediation (Mangenot, 2007)
  - Computer Mediated Communication
Background 2

• Emergent research in synthetic worlds
  ◦ Various fields (marketing, economics, psychology… and language learning)
  ◦ Very poor explanations of the research methodology used
  ◦ And/or methodology - copying that of other environments

• Need to develop research in didactics (Peachey et al, 2010)
Background 3

- European project ARCHI21
  - CLIL approach (content + language)
  - Intensive studio in architecture (French or English as a second language) face-to-face and in Second Life (February 2011)
  - Three kinds of activities combining architecture and language learning
    - Introduction to SL, socialisation
    - Building
    - Group reflective sessions
Second language research within synthetic worlds

- Methodology: same as in physical world + particularities of synthetic worlds
  - Avatar
  - Multimodal communication

- Research protocol
  - Depends on the aim and the object studied
  - Based upon the learning scenario
Aim of this presentation

- Epistemic perspective

- To expose problems, conditions and potential biases of qualitative research on pedagogical interactions in *Second Life*

- To give a few methodological leads
  - To put in place research protocols to study learners’ interactions in synthetic worlds
The avatar: what identity, what implications?

- Avatar = visual representation of a user
- Research in synthetic worlds

**Implications:**
- Identity of the actors
- Researcher’s positioning
- Data collection

*From* an avatar’s perspective  *About* avatars
The avatar: a virtual identity?

- Do we study an avatar, the person controlling it or both?
- How to ensure the person’s identity?
  - Several avatars for one user
  - Several users for one avatar
  - Easy to change your avatar’s appearance and name
Dual identity?

- **Researcher**
- **Researcher’s avatar**
- **Learner**
- **Learner’s avatar**

Worlds:
- **Physical world**
- **Synthetic worlds**
Ethical issues

- Consent form
  - Explanation of the data collected, participants’ rights, anonymity…
  - Not always easy to be in contact with the « real » person behind the avatar

- Private / public communication
  - Learners to collect interactions?
Researcher’s position

- Immersion / distance in relation to the research object
- Participant observation or not
- Position of the researcher-practitioner (De Lavergne, 2007)
- Participants’ perception of the researcher / Self-perception
- Do participants identify the researcher as such?
- What control over the data? How to measure of validity?
Questions

- Who collects?
  - Researcher, tutor, learner?
  - From what point of view
    - Avatar / 3D \(\rightarrow\) Subjective view

- What kind of data?
  - Public or private communication?
  - Need to access all of the data from the course?
    - What selection criteria?

- Where?
  - In-world or in the physical world?
What we did for ARCHI21

- **Learners:** creation of an avatar for the project, with a defined name (first name + suffix specific to project)
  - To identify learners and ensure their anonymity

- **Research avatars**
  - Animal characters
    - To identify the researcher as such
    - To avoid interactions with the researcher
  - Recording of the training sessions using these avatars (1 researcher per session / per group)
    - Limited movement and point of view
    - Access limited to public communication

- **Consent form sent by email**

- **Questionnaires and interviews conducted externally and not in the synthetic world**
Screen recording procedure

• Technical aspects
  ◦ Software for screen recording or avatar wearing a recording device
  ◦ *Second Life* settings
  ◦ Audio and video tests
  ◦ Partitioning of the plot (sound)

• Researcher’s avatar movements
  ◦ Point of view
  ◦ Decision-making
  ◦ With relation to the task
Video recording

Group reflective sessions – ARCHI21
Motionless participants
Limited movement of the researcher’s avatar and of the camera (zoom)
Video recording

Building activity - ARCHI21
Participants moving
Researcher’s avatar and camera moving a lot
Data analysis

- **Difficulties:**
  - Recording of the interactions
    - Movements of learners and researcher
    - Points of view
  - Multimodal data transcriptions
    - Depends on research aim
    - How to represent simultaneous multimodal behaviour in a 3D environment?
  - Anonymising interactions
    - Avatars’ names in videos and text chat scripts
    - Audio
Conclusion

Multimodal interactions in SL

Language learning

Multimodality

Avatar

Data collection

Identity

Researcher’s positionning
Thank you!

Aurélie Bayle & Anne-Laure Foucher
LRL
Publications: http://hal.archives-ouvertes.fr/LRL