



Studying pedagogical interactions in synthetic worlds

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Studying pedagogical interactions in synthetic worlds

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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...)



Interactions within synthetic worlds

- **Multimodal** : synchronous interactions through different modes available in the environment, used simultaneously or not
- Sallnas (2002), Betbeder et al (2007)

Modes	Functions / Tools
Textual	Chat, notecards, boards...
Oral	Audio
Gestual	Gestures
Spatial	Movements
Actionnal	Interactions with objects / environment

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 I

- 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



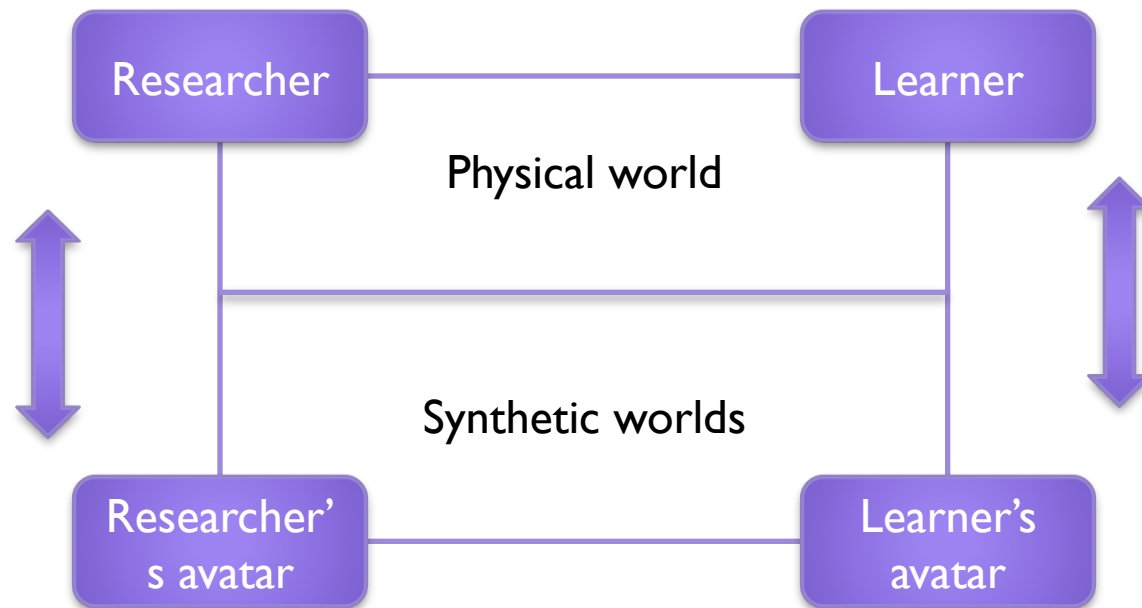
- Implications :
 - Identity of the actors
 - Researcher's positioning
 - Data collection



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?



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 → 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 ARCHI2 I

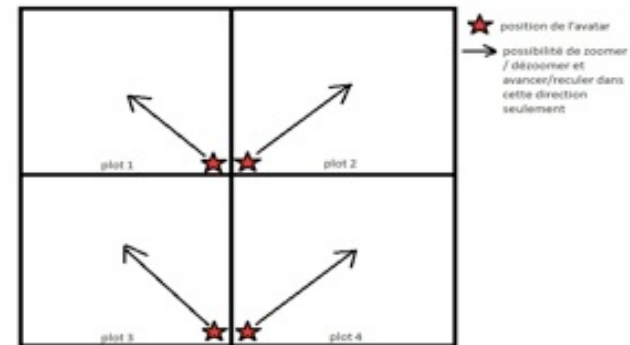
- Learners: creation of an avatar for the project, with a defined name (first name + suffix specific to project)
 - To identify learners and ensure their anonymity
- Research avatars
 - Animal characters



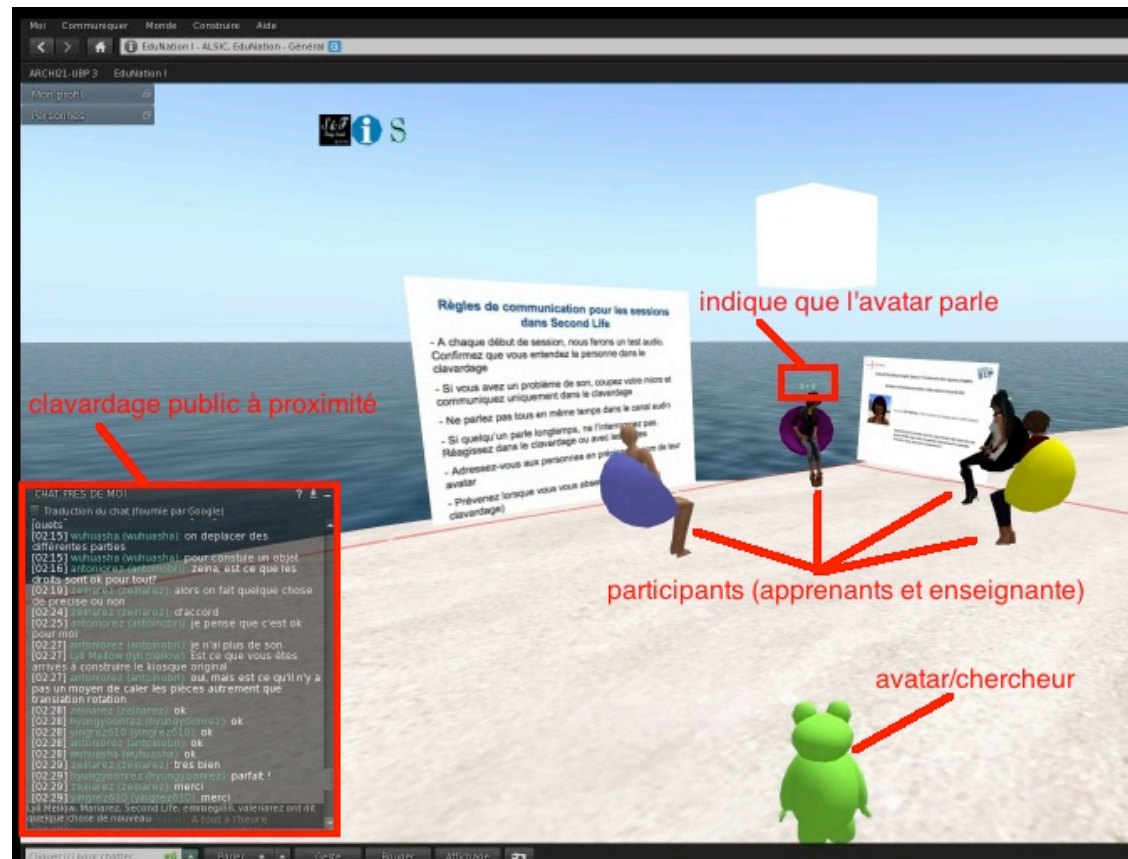
- To identify the researcher as such
 - To avoid interactions with the researcher
 - Recording of the training sessions using these avatars (1 researcher per session / per group)
 - Limited movement and point of view
 - Access limited to public communication
- Consent form sent by email
- Questionnaires 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 - ARCHI2I

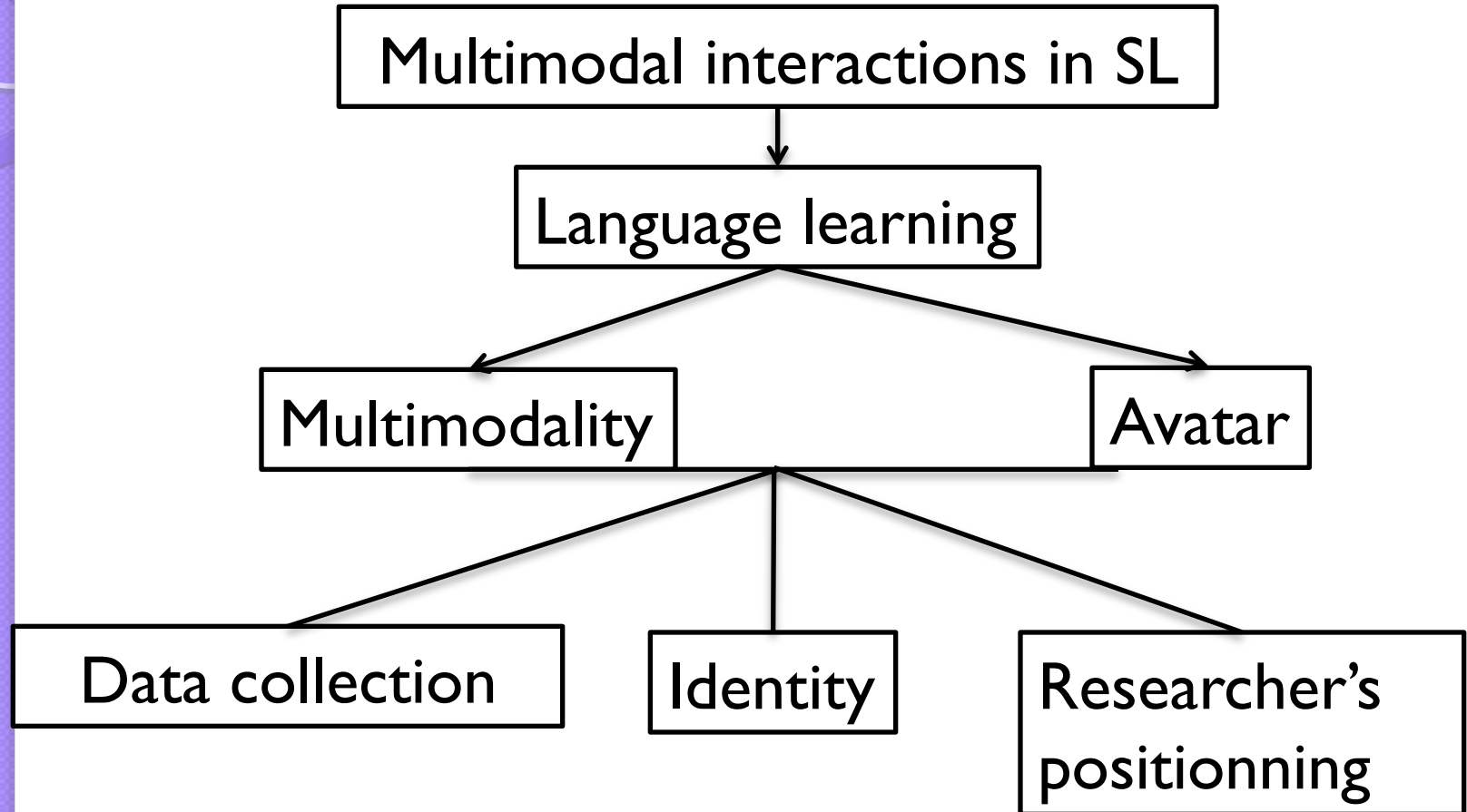
Participants moving

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





Thank
you !

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