Cooperative And Plurilingual Experimentations To Help L2 Learners Develop Their Listening Comprehension Skills

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Institutional context

- **French students’ disappointing results**
  - **2010 – National Tests**
    French students’ levels underneath the national curriculum requirements, especially in listening comprehension (LC)
    For example, in English: the percentage of students with a satisfactory mastery of LC amounted to 40.4% in 2010 when they were 51.3% in 2004
  - **2011 – 1st European Survey on Language Competences (ESLC)**
    French students’ levels generally lower than other European students’

- **Assessment of LC skills: new tests for the baccalauréat exam launched in 2013**
Listening is one of the skills that causes the most anxiety among students (Elkhafaifi, 2005; Goh, 2000)

L2 LC involves complex bottom-up and top-down processes

- **Top-down processes or interpretation processes**
  Modes of information processing that uses prior and context to build comprehension

- **Bottom-up processes or decoding processes**
  Modes of information processing whereby information flows from structures at lower levels to higher-level structures (Rost, 2002)
L2 listening comprehension from the viewpoint of cognitive psychology research (2/2)

- **Positive effects of a metacognitive approach**
  “Metacognition refers to listeners’ awareness of the cognitive processes involved in comprehension and the capacity to oversee, regulate and direct these processes” (Goh, 2008 quoted by Vandergrift and Goh, 2012, p. 23).
  “In sum, listeners who can apply metacognitive knowledge about listening during the cognitive processes of comprehension are better able to regulate these processes and draw on the relevant knowledge sources in an efficient manner to build text comprehension” (Vandergrfit, 2006, p. 23).

- **Differences in strategy use between skilled and less skilled listeners** (Field, 2001; Vandergrift 2003; Roussel & Tricot, 2015) and Sweller’s cognitive load theory (2006)
What research in L2 didactics shows (Gruson, 2006, 2008)

- Didactical analyses of the oral texts remain superficial
- Insufficient time devoted to pre-listening activities and, more generally, to listening itself
- The objectives of the listening activities remain often unclear
  - Testing vs teaching strategies
    “the practice of testing learners for they understanding of listening input rather than teaching them how to process and manage that input, is still predominant” (Vandergrift and Goh, 2012, p.13).
- A general lack of work on cognitive and metacognitive strategies
Main research questions

- How is it possible to help students:
  - process information automatically?
  - acquire new cognitive and metacognitive strategies?

- What kind of activities (cognitive vs metacognitive) seems to be the more efficient?

- For what kind of students (considering their initial levels) do these activities seem to be more efficient? Do less-skilled students benefit more from cognitive or metacognitive training? What about the more-skilled students?
Context of the study

- **A collaborative research**
  - Design-based research (Cobb & *et al*., 2003; Collins & *et al*., 2004)
  - Cooperative Engineering (Sensevy & *et al*., 2013)

- **A research group composed of a great variety of educational actors**
  - 5 language teachers (English, German and Spanish) working in two Breton High schools
  - 3 regional language inspectors & 3 language teacher trainers
  - 3 researchers (two L2 didacticians and one statistician)

- **A strong support from the French Institute of Education, the Ministry of Education and the Breton School of Education**

- **An exploratory study based on an experimental protocol**
The experimental protocol

Pre-tests in 3 languages

3 training sessions
- Groups 1
  Low-level cognitive training
- Groups 2
  Metacognitive training

Post-tests in 3 languages
Low-level cognitive training (Roussel & Gruson, 2013)

- A well-defined procedure for the implementation of the activities in class

- Similar low-level cognitive activities for all the students
  1) How many sentences can you hear in this short extract?
  2) How many words are there in this sentence?
  3) What are the subject and the verb in this sentence?
  4) How many adjectives are there in this sentence? Make a list of them.
  5) Fill in the blanks in the following extract.
  6) Write what you hear (dictation exercise)
  7) When you hear this extract, do French words come automatically to your mind? Which ones?
  8) In relation with this short extract, choose the sentence that corresponds to the best interpretation of the content among three propositions.
Metacognitive training

Pedagogical stages
(Vandergrift, 2004, 2014)

Prelistening: Planning/predicting stage

1. After students have been informed of the topic and text type, they predict the types of information and possible words they may hear.

First listen: First verification stage

2. Students verify their initial hypotheses, correct as required, and note additional information understood.
3. Students compare what they have understood/written with peers, modify as required, establish what still needs resolution, and decide on the important details that still require special attention.

Second listen: Second verification stage

4. Students verify points of earlier disagreement, make corrections, and write down additional details understood.
5. Class discussion in which all class members contribute to the reconstruction of the text’s main points and most pertinent details, interspersed with reflections on how students arrived at the meaning of certain words or parts of the text.

Third listen: Final verification stage

6. Students listen specifically for the information revealed in the class discussion which they were not able to decipher earlier.

Reflection stage

7. Based on the earlier discussion of strategies used to compensate for what was not understood, students write goals for the next listening activity.

4. Selective attention, monitoring, evaluation, and problem solving

5. Monitoring, evaluation, and problem solving

3. Monitoring, evaluation, planning, and selective attention

2. Selective attention, monitoring and evaluation

1. Planning and directed attention

4. Selective attention, monitoring, evaluation, and problem solving
Research methodology

❖ Data collecting

❖ Students’ documents (post-and pre-tests / training sessions)
❖ Pre-test and post-test scores for both the situation model ((Kintsch, 1998) & detailed comprehension
❖ Class films of the training sessions

❖ Data processing

❖ Analyses of the scores to the tests (108 students): impact of the type of training
❖ Analyses of students’ documents for English
❖ To be done : analyses of the class films (teachers’ role and place)
Any progression between pre- & post-test scores?

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<th></th>
<th>Pre-test</th>
<th>Post-test</th>
<th>t</th>
<th>df</th>
<th>p</th>
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<tbody>
<tr>
<td><strong>Situation model</strong></td>
<td>4.403</td>
<td>4.723</td>
<td>1.346</td>
<td>107</td>
<td>.181</td>
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<tr>
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<td>4.748</td>
<td>1.427</td>
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<td>.474</td>
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<td>.637</td>
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<tr>
<td><strong>Detailed comprehension</strong></td>
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<td>4.261</td>
<td>4.394</td>
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<td><strong>.000</strong></td>
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<td>4.345</td>
<td>3.040</td>
<td>53</td>
<td><strong>.004</strong></td>
</tr>
</tbody>
</table>

Whatever the type of training:
No significant increase for the situation model
A significant increase for detailed comprehension
The students' post-test scores strongly depend on their scores in the pre-test
✧ The student’s initial levels have a substantial impact on their LC whereas the type of training does not.

What is the most effective training based on the students' initial levels?

Dividing up the students into two groups according to the median of the scores in the pre-test (L1: lowest average pre-test score; L2: highest average pre-test score)
✧ G1: less-skilled students
✧ G2: more-skilled students
Only less-skilled students really benefit from the training

For less-skilled students, low-level cognitive training has a stronger impact on their performances in relation with the situation model while there is no progression in the case of metacognitive training.

For detailed comprehension, both types of training are equivalent in terms of effectiveness. The progression is significant in both cases.

For skilled students, whatever the type of training and the type of comprehension (situation model and detailed comprehension), their scores do not increase significantly even if we can observe that metacognitive training tends to be more effective.
First conclusions

- Low-level cognitive training seems to represent a promising way to meet less-skilled students’ needs in the field of L2 listening comprehension
- Only a slight positive impact of metacognitive training for more-skilled students
- Other results remain difficult to verify due to an insufficient number of students
  - Impact of the second language (English, German and Spanish)
  - Impact of the first language
Work under progress and future work

- Epistemic analyses of the documents used for the tests of the items selected for the assessment (For English mainly)

- Impact of students’ levels in French and of their general level to be verified

- Questionnaire for students under construction

- Second experimental cooperative engineering in 2015 - 2016
Thank you for your attention!