Metacognition In On-Line Foreign Language Learning

Ramona Henter¹, Ecaterina Maria Unianu¹

(¹) Universitatea “Transilvania” din Brașov,
Facultatea de Psihologie și Științele Educației
56, N. Bălcescu, Str., 500019, ROMÂNIA
E-mail: ramona.henter@unitbv.ro, caty.unianu@unibv.ro

Abstract

As modern learning is changing along with technological development, students must be equipped with techniques for efficient learning. Acquiring a foreign language through modern means and in unconventional environments (such as computer assisted classes) calls for both effective teaching methods and students’ personal involvement in learning (self-regulated learning). Individual differences among language learners play a crucial role in the level of acquiring a foreign language, but research shows that those with good metacognitive skills have better results in learning a foreign language. Metacognition, the level of awareness about our own cognitive processes, comprises metacognitive knowledge and skills. The most important in learning a foreign language are the procedural and conditional skills (to know how, where and when to use a certain strategy). We tried to identify computer assisted language learning courses and models of individual learning in a hypermedia environment in which metacognition plays an important part in order to discover their strengths, the metacognitive knowledge and skills required from students, as a starting point for an on-line English course. The results are gathered in a sketch of an on-line English course.

Keywords: metacognition, metacognitive skills, computer assisted language learning

1. Introduction

Metacognition, defined as awareness of one’s cognitive states, processes and knowledge and as the ability to consciously monitor and adjust these cognitive states, processes and knowledge (Papaleontiou – Louca, 2008), may be „the missing link in school learning” (Nicholls, 2003), the thing that differentiates individuals as concerning their performance. Metacognition refers to what people know about cognition in general and about their own cognitive processes and retrieval, in particular, as well as how they use this knowledge to adjust their informational processes and behaviour (Koriat, 2007).

At the basis of a metacognitive training is the concept of metacognition, introduced by John Flavell in 1976 to define the awareness of thinking process: what we think, how we think when we face a certain task or situation and why we think in a certain way as well as the ability to monitor these processes (Goh, 2008). Papaleontiou-Louca (2008) underlines the fact that metacognition, on one hand, and learning and development, on the other hand, are not equal, metacognition meaning the process of regulating learning and development.

The huge potential of metacognition in obtaining performance in language learning was first detected by Wenden in 1987 (cited in Goh 2008) and many different interpretations of metacognition and metacognitive models have appeared since, models attempting to explain the link between metacognition and language learning. In order to perform in learning a foreign
language one needs to be aware of the learning process and to use learning strategies (including metacognition) flexibly and effectively (Huang, 2005).

Metacognition represents the ability to reflect on what you do or do not do as a learner and on what you know or do not know, leading to critical thinking as well as to changes in the way of learning (Anderson, 2005). Basic metacognitive knowledge is essential while learning a foreign language (El-Koumy, 2004) and teachers can help their students think about what is going on in their minds while acquiring a new language, which in turn will lead to better learning skills (Anderson, 2002). In this line, research shows that individual differences among language learners play an extremely important role in the level of acquiring a foreign language and especially those with good metacognitive skills have better results in learning a foreign language.

As modern learning is changing along with technological development, students (as everyone else who desires to learn in an on-line environment) must be equipped with techniques for efficient learning. Even more, acquiring a foreign language through modern means and in unconventional environments (on-line courses or computer assisted classes, as part of both initial and continuous training) calls for effective teaching methods as well as students’ personal involvement in learning, mainly for self-regulated learning.

2. Methodology

2.1. Literature review

There were accessed six online databases (Science Direct, ProQuest, SpringerLink, Oxford Journals, Wiley Online Library, Ebsco) to identify specific items that refer to learning a foreign language in an on-line environment and at the same time using metacognitive strategies. Although we found a great number of articles matching this search, few corresponded to what we had in mind. Mostly they were computer aided courses with a metacognitive component or traditional courses with on-line or computer assisted and metacognitive components.

The search looked for English or French texts published in the last ten years (2002-2012). The results are presented in Table no. 1.

<table>
<thead>
<tr>
<th>Online data bases</th>
<th>Key words: “metacognition” &amp; “learning English” &amp; “on line”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science Direct</td>
<td>710</td>
</tr>
<tr>
<td>Cambridge Journals</td>
<td>74</td>
</tr>
<tr>
<td>SpringerLink</td>
<td>1712</td>
</tr>
<tr>
<td>Oxford Journals</td>
<td>38</td>
</tr>
<tr>
<td>Wiley Online Library</td>
<td>469</td>
</tr>
<tr>
<td>Ebsco</td>
<td>4</td>
</tr>
</tbody>
</table>

2.2. Eligibility criteria

We tried to identify on-line courses in which metacognition plays an important part. We analyzed these successful models in on-line language teaching in order to identify their strengths as well as the level of metacognitive knowledge and skills involved/required from the students, as a starting point for developing an on-line English language course. We also took into consideration individual learning in a hypermedia environment, where metacognitive knowledge is more clearly involved in planning, monitoring, testing, revising and assessing the strategies used for learning. The criteria at the basis for their selection were:
2.3. Goals

We wanted to identify the strengths of English courses with a computer assisted component, as well as the metacognitive skills found as successful in other research.

3. Results

Due to the great number of articles concerned with research on computer assisted language learning (CALL), we cannot review all of them in such a short space so we selected their common strong points for each linguistic skill (reading, writing, listening, and speaking). We grouped these strengths in principles to be followed for success in acquiring a certain linguistic skill and then sketched a course syllabus for teaching English on-line.

3.1. General principles for metacognitive learning of a foreign language in an on-line environment

Research (Bannert et al, 2009) have identified three general principles for effective metacognitive instruction relevant for hypermedia learning. One major design principle is to integrate metacognitive instruction into the domain-specific instruction. That is to to embed teaching metacognitive activities in the subject matter. The second design principle of effective instruction is to explain the application and usefulness of all instructed metacognitive strategies so that students will use them spontaneously in the training session or afterwards. The third design principle underlines the importance of the fact that enough training time must be provided to students in order to implement and automatise the metacognitive activities that have just been learned.

3.2. Metacognitive learning of a foreign language in an on-line environment - reading

The metacognitive skills during reading are oriented towards better understanding and memorizing of the text being read, the main strategies for cognitive adjustment including planning, monitoring, applying, revising, and assessing (Cubukcu, 2008). Also, even those who have good reading skills can improve them if they are trained in the use of effective strategies and are taught to monitor their activity while reading (Cubukcu, 2008). These strategies include: use of strong personal points (exploiting the abilities best mastered by those who read - if you are good at interpreting graphs, rely on information obtained from them, for example), deduction of meaning of unknown words, use of personal information about topic, search for information relevant to the objective pursued, began returning to the questions to find the answers. Also, use of prior knowledge on the subject in question can improve understanding of the read (El-Koumy, 2004).

3.3. Metacognitive learning of a foreign language in an on-line environment - writing

Writing requires a logical sequencing of sentences which is a metacognitive activity. On-line writing needs the same metacognitive overview.

3.4. Metacognitive learning of a foreign language in an on-line environment -listening

The metacognitive skills for listening make listeners implicitly use certain metacognitive techniques: prediction, monitoring, assessing and problem solving. Having some knowledge about the process of learning correlates with the students’ listening abilities (Vandergrift et al, 2006).
3.5. Metacognitive learning of a foreign language in an on-line environment - speaking
The participants to any conversation use metacognitive skills such as verbal, non-verbal and para-verbal feedback. Speech has to be monitored at the metacognitive level, embedding metacognitive knowledge to permanently control and monitor conversation.

3.6. English course sketch
We suggest a 10 lessons course for learning English in an on-line environment and using metacognitive strategies. The students should be equipped with a computer and an internet connection. The teacher is still an important part of the course, face-to-face meetings being necessary in the beginning (lesson a.) and at the end, for a feedback session. The course presents the metacognitive techniques that can be taught during each class, without any reference to the content because the content can be chosen according to the students’ need (their level of English knowledge, their interests). The aims for these lessons are:

a) Creating a personal learning environment (PLE) – a collection of different information and communication technology tools and software which foster self-regulated and collaborative learning (Valtonen et al, 2011). PLEs are unique and reflect each student’s learning needs and ways of learning.

b) Identifying own metacognitive strategies used while reading, by each student. Presentation and modelling of other metacognitive reading strategies.

c) Individual practice of the acquired skills in on-line environments.

d) Identifying own metacognitive strategies used while listening, by each student. Presentation and modelling of other metacognitive listening strategies. Students’ individual practice.

e) Individual practice of all previously acquired skills in on-line environments.

f) Identifying own metacognitive strategies used while writing, by each student. Presentation and modelling of other metacognitive writing strategies. Students’ individual practice.

g) Individual practice of all previously acquired skills in on-line environments.

h) Identifying own metacognitive strategies used while speaking, by each student. Presentation and modelling of other metacognitive speaking strategies. Students’ individual practice.

i) Individual practice of all previously acquired skills in on-line environments.

j) Teacher-student face-to-face feedback

5. Conclusions
Metacognitive instruction, embedded in regular teaching, has been proved to be a successful strategy in computer assisted language learning. We suggested some objectives to be set as aims for a computer assisted language learning course with the main focus on metacognition as a future absolutely necessary tool for learning everything.

References


