Mastering CALL: is there a role for computer-wiseness?*

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Abstract

One of the characteristics of CALL is that the use of ICT allows for autonomous learning. As multimedia language learning content producers have been adapting their products to take this variable into account, and as language learners have acquired familiarity with the media, new developments have been observed in the pedagogy of on-line or off-line learning.

This paper presents and discusses the concept of 'computer-wiseness'. It attempts to show how recent CALL materials build on the users' and content developers' shared knowledge about computer environments – on what the developers and pedagogues expect in the users' behaviors. It describes the components of the experience acquired in the years that both teachers and learners have been developing and using CALL programs, and shows how they may be reflected in the materials. It also stresses the fact that specific teacher roles can be and have been exemplified in order to foster and encourage autonomy, and that provision has been made for the users' 'computer wiseness'.

Keywords: CALL, autonomous learning, computer wiseness, teachers' roles

1 Introduction

Language learners have acquired familiarity with computer environments, and they have therefore become more self-sufficient when using language learning materials with ICT. Content producers, on the other hand, have become more capable of integrating various components of the language teaching research results into their materials. Building on this

* This is a slightly revised version of a paper presented at the EUROCALL 2007 conference.

experience is a new challenge for authors of CALL materials. But the effects of the changes resulting from the experience acquired in the years that both teachers and learners have been developing or using CALL have not yet really been explored.

In addition to the recent changes that familiarity with computer environments may have brought about, other important features in CALL are the fact that the use of ICT allows for autonomous learning and that language learning has often become part of what is called 'life long learning'.

In this paper, I would like to show how CALL materials can and do build on the users' and content developers' shared knowledge about new learning environments, and more specifically on what the developers and pedagogues expect in the users' behaviors. This will trigger the following questions about the pedagogy of CALL and about what we may expect to observe: What can the place and role of help be in such environments? Does this have an influence on how the teachers' roles are exemplified in CALL material? Can we say that there is, or that we are moving toward, some degree of normalization in users' and developers' practices?

2 Shared knowledge, shared expectations

A substantial part of the users' acquired mastery has to do with computer literacy, also called multiliteracy, which refers both to technical competence (keyboarding skills, etc.) and to information and multimedia literacy (locating information on a screen, as well as interacting in computer-mediated communication – in blogs and forums, especially)[1].

But in CALL environments specific behaviors are summoned; the skills that have just been mentioned are applied to learning behaviors (i.e., users have acquired, or need to acquire, skills in interacting with the software in learning situations). Teachers and content developers, on the one hand, and learners, on the other hand, have adjusted to the fact that the use of

[1] Other presentations in the EUROCALL 2007 conference have dealt with 'technical training' and 'digital nativeness' (Prensky, 2001).

CALL material often associates autonomous learning and a great freedom – the freedom induced by the environment itself (navigation, with its corollaries, i.e., non-linear progression, multiple entry points, clicking/not clicking, moving / not moving to the next activity, asking for help, repeating tasks…).

This leads us to the notion that I would like to introduce here, 'computer wiseness'. This term is coined after 'test wiseness', a phrase which has been used in education for more than 20 years (see for example Gershon and Bergstrom, 1995), and which refers to a student's ability to perform at his best on tests by knowing and / or acquiring tips on how to take tests. What I mean by 'computer wiseness', then, is the ability that learners have to take full advantage of their knowledge of the potential of computer environments for carrying out learning tasks – and more specifically here, language learning tasks.

Before attempting to identify those aspects of the functionalities of CALL material which may be influenced by, or may reflect, the mastery gained on both sides (users and content developers), in a perspective in which such mastery is viewed as globally positive, it is important to acknowledge the fact that computer wiseness may also affect learners' behaviors negatively: It is true that in some learning contexts, the users of computer-assisted learning materials may use their familiarity with ICT environments and with learning in such environments to evade actual learning (e.g., by copy-pasting, automatic translation, clicking-guessing, etc.), instead of going through the learning tasks as planned by content developers or teachers. In this paper, however, I will only be considering computer wiseness, that is, the characteristics of the mastery acquired through experience of CALL, with the assumption that learners "play fair".

There are several ways to go about exploring the effects of the gained experience. I have chosen to explore shared knowledge and expectations along three perspectives:

- the freedom associated with autonomous learning

- the absence of a physical teacher (which may sometimes be viewed as a handicap)

- the built-in limitations of offline software

In order to illustrate how this mastery influences and is reflected today in the materials, I will be using a few examples from the recent French EUROMOBIL program[2].

3 Freedom associated with autonomous learning

More and more, whether the material is being used individually or in blended learning, learners are mostly on their own when interacting with the machine. This is particularly true in life-long learning. It implies that they are not under the supervision of a tutor or teacher when they interact with the computer software.

Their freedom means that they are able to, or have to, make choices, and more specifically, they must:

- choose their tasks,
- choose a level of competence or of difficulty,
- choose the pace at which they go through the materials.

What are those elements that constitute shared knowledge about how to go about these choices? What does the learners' computer skills and computer wiseness imply? How does their ability to deal with learning tasks come into play?

3.1 Choice of task

[2] EUROMOBIL programs provide language and culture resources to help foreign students in Europe adjust in their host university and country. The French EUROMOBIL program aims at providing foreign students intending to study in French universities with linguistic and cultural information that will make them able to adapt adequately in their host environment, in academic as well as in everyday situations (Euromobil 1: 1999-2003, English, Finnish, German, Hungarian; Project 172139-cp-2-2000-1-FI-L2, Euromobil 2 : 2005-2007; Czech, French, Polish, Portuguese, Romanian; Project 225825-CP-1-2005-1-FR-LINGUA-L2).

Users of CALL software know that, although navigation is one principle of ICT (they have acquired a certain amount of autonomy by exploring Web contents), there is some linearity, some built-in progression in most learning materials, and especially in off-line materials. Therefore, and as a joint effect of their 'traditional' experience of learning and of their previous use of ICT learning material, they will look for organizing principles before making their choices of tasks.

3.2 Choice of level

As users who have acquired the ability to deal with learning tasks, they know that some tasks are easier or more difficult than others, and therefore they will look for indications about the degree of difficulty of tasks, or their level in terms of language competence; they may search for some indication as to how to decide which level and types of tasks to choose.

They will attend to ICT-specific optional functionalities that may adapt the level of difficulty to their own capacities: hints or help (lexical or grammatical, for example), transcript of audio material, etc.

They may also look for a diagnosis of level. As the Common European Framework of Reference (CEFR) has gained more recognition, especially within Europe, authors of various recent CALL materials, facing the question of how their product relates to the reference levels set in the Framework, will tend to give some indication about this relationship.

3.3 Choice of pace

The learners know that when working on their own with CALL materials they can usually spend any length of time on a specific task. Going at their own pace is made possible because the software allows for repetition, interruption, doing a task over again, and therefore they are able to make their own decisions about when to move forward.

3.4 Choices reflected in CALL materials

What features of CALL programs match these assumptions and expectations? What would we expect to find that would capitalize on this computer wiseness?

First, the materials will propose topics that can be identified easily, leaving to the user the possibility to enter the program at any point and to construct his own itinerary. For example, in the FR Euromobil program, as in a number of other products, the main topics are clearly presented and can be activated in one click, and once the learner has started with one of the activities of the program, a site map is always visible in order to allow for choice of tasks and give a clear representation of the organisation of the material. In this program, once the user has chosen a topic, various approaches to navigation are possible: since the tasks are organized for three levels of competence, a less advanced student can go through all the 'Novice' activities, or focus on the activities of the first Unit, and then go through the activities of the three different levels. Another student may choose to go through the oral comprehension activities, or focus on the lexical information specific to one of the topics that are dealt with.

Navigation, then, can be viewed as one of the tools that allow for personalized exploration and trajectory, and the learners using the program autonomously are expected to use their computer wiseness to take advantage of the functionalities that the authors have included in the material: for example, they will click on the appropriate buttons in order to move back, to change task or level, or to access lexical help.

The availability of choices will be expected in various points and will cover the various types of choices, and the users' ability to take advantage of their freedom will be both taken into account and supported. The former refers to the visibility and ease of access of choices, while the latter refers to making explicit for them the nature and the potential of choices. As the

French Euromobil program does, the more recent software actually build upon the users' metacognitive awareness and autonomy and present the learners information to enable them to make wise choices (for example, by explaining the possible entry points, the levels and the thematic organization, or how to access the lexical information).

4 Autonomy : absence of a physical teacher

The second perspective along which I want to explore the effects of the gained experience is autonomy associated to the absence of a physical teacher. We know that in all CALL software various teachers' roles are exemplified (especially tutor and evaluator) and I will focus on the former, because it seems to be the role that is taking more and more prominence in recent material.

The users of CALL software know that there is no face to face interaction, and they are aware that there are constraints on the kind of help, support (cognitive and affective), and feedback that can be obtained from the software itself.

As a consequence, they will adopt a problem-solving posture and look for some substitute to the support that a physical teacher would provide, in particular to handle individual differences.

First, because there is no teacher to decide that tasks are too easy or too difficult, learners will look for indications of different degrees of difficulty, for the possibility to change level (especially if they have found that they made an inappropriate choice to start with).

They may look for built-in devices that will be a response to their individual profiles. For example, because of their computer literacy (more precisely, their 'multimedia literacy'), they are aware of the complementary nature of the different medias, and therefore they know they can use visual cues to understand spoken language in a task of oral comprehension of a video sequence. They may also check if the audio material is available in the form of a transcript.

As users with established learning behaviors, they know that the activities proposed and the questions asked are supposed to lead them to comprehension of the material and to induce learning. Their problem-solving behavior is actually the joint result of their use of the Internet, of their experience of traditional learning, and of learning with ICT.

They will look for help when carrying on the various tasks, and more generally for some substitute to a teacher's encouragements and cognitive and affective support.

How do content developers cater to individual differences in order to make up for the absence of a physical teacher? Their responses are progressively 'wiser' in recent materials as they provide:

1. help : optional, easy to access
2. feedback: informative , rather than evaluative
3. motivational support : evaluation and addition of an affective dimension

4.1 *Optional help*

Optional help may appear in various forms to cater to individual differences. It may be the possibility to activate or mask the transcript of audio material, or to obtain lexical help by clicking on highlighted words.

4.2 Feedback

Feedback will take into account different degrees of ability for independent progression and self evaluation of their own performance among the learners.

In the early generations of computer-assisted learning materials, feedback was of the Right/Wrong type, that is, it gave the user an indication, usually by a more or less aggressive or unpleasant sound, that his response was wrong, while a more pleasant sound was an indication of a correct behavior or response. Among recent CALL software (and this is true

also for some recent on-line materials), some have adopted a more constructive approach to feedback: they provide feedback which is of the "informative" type, that is, which gives guidance and complementary information to the learner.

This type of feedback either reformulates and gives positive reinforcement, or provides guidance in the case of a wrong response. The authors' assumptions and expectations are that the more insecure or more curious learners will read the feedback comments in order to confirm or improve their knowledge, as a kind of substitute to tutoring in face to face interaction, and to the scaffolding that a real teacher might provide.

Here are examples of such feedback on answers in Multiple Choice questions:

- feedback with Correct answer - *YES, and this is why…*
- feedback with Wrong answer - *NO, you can go to … in order to find out how it works*

4.3 Motivational support

Content developers may also provide motivational support in the form of feedback comments or of comments on the learner's progress in the exploration of the content. Concerning motivation and evaluation by the learner of his or her own progress, it is interesting to note that a number of recent programs have no actual evaluation component. They aim at helping the learners rather than at evaluating them. A clear cut distinction has appeared between two types of software: there are specific tools for evaluation (and in particular for the evaluation of language proficiency) and for learning.

But, considering the absence of a physical teacher, the opportunity for self-evaluation is often provided; it can be in the form of summary sheets or check lists, depending on what is being evaluated (e.g., performance in mastery of content, or rate of progression). The authors' expectation here is that the user will return to the tasks and content if he or she finds that what

has been learned or achieved does not match the content of the summary sheet or of the check list.

The affective dimension is important and often a problem in CALL. The affective motivational support may be provided by the comments included in the activities and the feedback. Not all users will need all the comments, but in addition to the cognitive support that appears when a task has been completed successfully, comments can also be provided concerning the progression of the user in dealing with the content, not in the form of grades or quantified degrees of achievement, but by qualitative comments that aim at encouraging the learners' progression.

5 Knowledge about the specificity of the media

Both content developers and learners have become aware of software potential and limitations. They know about the high potential for repeating, for individual pacing, for cyclic use of the material; they know about the possibility to enter at any point, to stop and go. The users also know, though not necessarily at a level of open consciousness, how helpful CALL material can be for practicing oral skills (comprehension, repetition)

However, they are also aware of the limitations that are attached to CALL. The restrictions on open-ended communication are now well-known to both learners and teachers. Actual spontaneous production is extremely limited, and this is why some CALL materials now include an on-line component to allow for actual communication in the foreign language. This potential and these limitations are often reflected in recent materials by deliberate focus on receptive language skills. Important parts of the programs are based on authentic or semi-authentic video materials, with activities aiming at guiding the user toward comprehension of its informative content in the foreign language.

In terms of the limitations on spontaneous language production (speaking, writing), the more recent programs will tend to direct the users to the complementary tools that are now more and more available: in the case of the French Euromobil program, for example, the users can click on a link in specific spots of the program that leads them to an online forum. The content developers' assumption and expectation is that because of the users' awareness of the software limitations and because of their computer literacy, the learners will be willing and able to access an online communication environment.

6 Summary and concluding remarks

'Computer wiseness', the acquired mastery in developing and using CALL material, is a combination of digital literacy and specific abilities to interact with learning material in a way that will promote learning in an autonomous environment. The objective has been to identify components of this mastery and reflect on the way it may affect learners' behaviors and content developers' approach to their tasks.

Computer wiseness on both sides seems to result in offering the users of CALL materials more choices: choices in going through the resources, in getting help, in accessing the web… Authors also tend to expect the learners to be able to reflect on their needs and use the software accordingly. The choices they propose reflect their trust in the users' self assessment and appraisal of the learning situation. This seems to strike a new balance between directivity, which underlies any teaching design, and freedom of action.

Teachers' roles

Does this mean that in order to foster and encourage autonomy, in making provision for the users' computer-wiseness, specific teacher roles are exemplified? There is no doubt that the teacher's role as a content developer is absolutely basic : topics must be chosen and proposed,

goals to be reached must be made explicit, and the overall architecture of products must be constructed.

But the most prominent role for the teacher seems to have become the tutor's role: he organizes, facilitates, stimulates, personalizes, supports motivation (by encouraging, giving feedback and comments, summarizing contents), while handing over more responsibility and freedom to the learners.

Although computer wiseness is gaining ground, we may still be a long way from maturity. Do learners want to take advantage of their acquired mastery? Are teachers willing to hand over the control to the users of their materials? As Räsänen and Meus (2003: 3) wrote: "Much work needs to be done both in terms of […] teacher and learner development for the full potential of new learning environments to become used in language learning and teaching….".

Do we create CALL materials today that are different from older materials in this respect? As Räsänen and Meus (2003: 5) also wrote, "the changes in the attitudes, initiative, and approaches required from both learners and teachers in order to manage knowledge and skill construction together in a reciprocal partnership while using new technologies in a flexible way are substantial in nature and can only be implemented over a considerable time period."

Normalisation of practices

It would be interesting to select a number of CALL programs produced over a given period and trace the evolution towards the normalisation of:

- teachers' roles exemplified,
- provision for users' familiarity with technical environment,
- user's familiarity with specific constraints in CALL environments,
- motivating devices,

- degree of freedom in going through the material,
- presence/absence/ option of evaluation,
- links to the Web.

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