

PROVIDING SCAFFOLDING AND FEEDBACK IN ONLINE LEARNING ENVIRONMENTS

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Résumé

L'Internet peut favoriser l'autonomie de l'apprenant si les possibilités de la technologie sont employées pour créer des environnements d'apprentissage où les étudiants peuvent faire leurs propres choix, réfléchir sur la façon dont ils apprennent et évaluer leurs propres progrès. Cependant, dans un environnement en ligne, les étudiants ont également besoin de soutien suffisant pour employer des ressources et pour s'engager dans une tâche. Le but de cet article est de décrire les différents types de soutien qui peuvent être incorporés dans un environnement d'apprentissage des langues en ligne.

Abstract

The internet can promote learner autonomy if the technology is used to create learning environments where students can make their own choices, reflect on how they are learning and assess their own progress. However, when working in an online environment, students also need sufficient support to use resources and engage in a task. Providing the appropriate support for learners involves: a) helping learners plan their learning, set their own goals, and manage the materials; b) setting tasks that raise learners' awareness of language and of language learning; c) incorporating tools for self-assessment and reflection and for social interaction. The purpose of this paper is to describe the different types of support that can be incorporated into an online language learning environment.

Introduction ¹

When discussing the role of ICT, and specifically online technologies, in language learning, it is often stressed that they can help to promote autonomous learning (K. Frizler, 1995; M. Warschauer, 1996; P. Benson, 1998). The internet is a useful tool in a learner-centred approach, since it fosters self-paced instruction and it encourages the learners' choice: they can choose what to learn, where to begin and how to proceed, based on their own interests and needs. It also enables students to access a great variety of authentic texts that fit their interests and give them the opportunity to interact with others in the target language. However, as has also been pointed out (P. Benson, 1998), this new technology does not guarantee by itself the adoption of a learner-centred approach and the promotion of autonomy. A great number of online learning environments are intended for self-access and for self-study, but this does not necessarily lead to the development of autonomy.

The design of online language learning environments and language activities must always be governed by the tenet that pedagogy leads technology and not the other way round. We therefore first need to examine what conditions help to promote autonomous learning and then analyse how these conditions can be integrated into the learning environment. The capabilities of technology should be used to create learner-centred learning environments which focus on the needs of the learners, providing them with the necessary tools to engage in authentic learning experiences. Students must be able to make their own choices, to reflect on how they are learning and to assess their progress. However, to make effective use of the web for autonomous learning, students need support which allows them to use resources and engage in a task, and tools which help them develop cognitive and metacognitive strategies. This support includes tools for self-assessment and for teacher and peer feedback. The purpose of this paper is to describe different types of support that can be incorporated into an online language learning environment.

1. Autonomous learning and online learning environments

Holec (1981: 3) defines autonomy as the ability to “take charge of one’s own learning”, that is, to take responsibility for various learning decisions. This implies deciding what, when, how, and for how long to learn: formulating learning goals, selecting materials and techniques to learn, choosing appropriate learning strategies and evaluating outcomes (H. Holec, 1981; L. Dam, 1990). Later, Little (1991: 4) defines autonomy as “a capacity for detachment, critical reflection, decision-making and independent action.” It is not, therefore, a teaching method, but a capacity that can be fostered by any method that enables learners to have more responsibility for their learning (D. Little, 1991; P. Benson, 2001). Little emphasises that autonomy is not the same as self-instruction, since autonomous learning is not the same as teacherless learning and it by no means implies letting learners cope on their own.

Autonomous learning therefore involves an active role for the learners, who take control over aspects of their learning, and the supporting and facilitating role of the teacher. This view of the roles of the learner and the teacher belongs to a

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constructivist theory of learning. According to the constructivist view, learners learn by restructuring their experience and constructing knowledge, not by having the teacher's knowledge transferred to them. The role of the teacher is to help them construct this knowledge. This is clearly expressed in Palmer's words (1988: 6):

I have no question that students who learn, not professors who perform, is what teaching is all about (...). Teachers possess the power to create conditions that can help students learn a great deal—or keep them from learning much at all. Teaching is the intentional act of creating those conditions.

A constructivist notion that helps to explain the role of the teacher and that is highly relevant in online learning environments is scaffolding. McLoughlin and Marshall (2000) define scaffolding in the following way:

scaffolding is a form of assistance provided to a learner by a more capable teacher or peer that helps the learners perform a task that would normally not be possible to accomplish by working independently.

This kind of assistance is essential if we understand autonomy as a capacity that should be fostered (D. Little, 1991). There are different levels of autonomy (D. Nunan, 1997), and the teacher must not assume that students can learn independently, but develop learning skills in learners which will help them become increasingly autonomous. Learners need guided and flexible support, which must be adjusted to the learner's needs and to the tasks. The support must provide the learner with the different tools and techniques to perform the task at his/her current level of competence and must diminish when the learner no longer needs it. Scaffolding implies balancing the opportunities for students' independence and the teacher's guidance and support. After summarising the literature on scaffolding, McLoughlin (2002: 155) concludes that effective scaffolding, both in distance and face-to-face education, is characterised by the following components:

reducing the scope for failure in the task that the learner is attempting; enabling learners to accomplish a task that they would not be able to achieve on their own; moving learners to a new and improved zone of understanding; bringing learners closer to a state of independent competence.

Several researchers have focused on the features that online learning environments should have to support the development of autonomous life-long learners. Linn (1996) identifies the following features:

- 1) helping students make effective decisions and construct their own knowledge;
- 2) helping learners recognise how and why they learn;
- 3) helping students set their own goals, diagnose their strengths, and limitations, and select activities compatible with their goals;
- 4) providing opportunities for independent projects related to personal goals;
- 5) encouraging students to take responsibility for their own learning, ie encouraging them to set goals, control their own progress, and request guidance from teachers and peers;
- 6) providing tasks that allow students to practice these skills;
- 7) providing autonomous learning activities which lead to the development of cognitive and metacognitive strategies: tasks that involve linking ideas,

- comparing alternatives, reflecting on progress, etc;
- 8) structuring courses so as to enable students to engage in collaborative practices and to get support from other students.

McLoughlin and Marshall (2000) state that for effective online learning, teachers must help students develop the following 'learning to learn' skills: articulation (being aware of one's own learning), self-regulation (being able to set goals and choose strategies to achieve the goal or complete a task), development of independent learning strategies, self-assessment, reflection, and self-monitoring.

Linn (1996) as well as McLoughlin and Marshall (2000) stress the importance of providing students with support that helps them become autonomous learners. In their discussion of the forms of effective support that are required to foster higher order thinking in distance education settings mediated by technology, McLoughlin and Oliver (1998) conclude that this support would need to include the following aspects: encouraging reflective thinking, providing social support for interaction and the sharing of ideas, and providing for feedback from peers and teachers. McLoughlin (2002) also stresses the important role of peers and teachers-facilitators and states that the collaborative and communicative aspects of online learning have given way to new possibilities for support. All these pieces of research show that we need a learning environment which provides the learners with support tools to enable them to complete the tasks, which promotes learner independence through critical reflection and self-assessment and which provides for teacher and peer support and feedback.

2. How to incorporate support in online language learning environments

There are several ways to help the learner in an online language learning environment:

1. Helping learners to set their own goals, to decide how to achieve these goals, and to select materials in accordance with their objectives. One way to help learners is to present them with a learning map with multiple scenarios, perspectives and alternative learning paths, which would allow them to plan their learning and make their own choices (C. McLoughlin, 2002). It is important to make learners aware of when the different tasks can be useful and relevant for their purposes, which implies providing explicit and clear instructions regarding the objectives that can be achieved with each task.

The activities proposed need to be structured, so that the learners who need support can see what steps to follow in order to achieve the goals, but they should also offer the opportunity to make choices (eg proposing alternative paths to follow or letting learners choose between different sub-tasks or alternative ways to perform the task). It is also necessary to put the materials in context, ie new information should be meaningfully connected to prior knowledge. In addition, if there is a relationship between different parts of the learning materials, this relation must be made explicit, so that learners can choose materials in a meaningful order.

2. The use of materials that have been carefully evaluated by the teacher. In

designing a learning environment, teachers should select and include materials and resources according to the students' level of competence and needs. When deciding which resources to include, teachers should try to create a learning environment which is eclectic enough to include the different needs of the students. Evaluating materials does not mean telling learners which materials to use, but helping them to decide between materials that they can use to achieve their objectives. Learners should be able to take responsibility for their own learning and make their own choices.

When providing the learners with links to the resources they may need to complete a task, the teacher should evaluate these sites carefully in advance and make sure that they are relevant and provide the learners with appropriate input to develop the task (D. Board, 2002). There should not be so many resources that the learners feel overwhelmed by the options available, but there should be enough links to enable them to evaluate the resources themselves and decide which ones to use in order to complete the tasks.

Variety in learning materials can help to cater for different learning styles and student needs. The teacher can also incorporate materials and links to resources in various forms (text, graphics and pictures, audio, video, etc). Presenting information in different modes simultaneously enables the learner to select the form of the content and can help to facilitate comprehension.

3. Support elements that help learners to comprehend the input and thus complete the task. They need support structures and tools that enable them to engage in the task. Learners should receive help to understand texts with unfamiliar vocabulary and grammar (C. Chapelle, 1998; C. McLoughlin, 2002; L. Barker & T. Weston, nd). This help can be provided in several ways (C. Chapelle, 1998; L. Barker & T. Weston, nd): in the form of hypertext links to terms, definitions, explanations, and images; as "help" buttons for learners who need assistance when completing an exercise; in the form of repetition, simplification through restatements, elaboration, or added redundancy; in the form of media files that are delivered to the learners when they require it, or only after trying to do an exercise. Learners can also be provided with files with information on linguistic structures (lexico-grammatical structures, types of genres, etc) that are important to understand the text.

4. Elements in materials that raise language awareness. Chapelle (1998) stresses the importance of making the linguistic characteristics of the target language input salient, in order to help learners in their acquisition. This might be achieved in CALL activities by highlighting them in a different colour on the screen. Or the learning environment could allow the student to see specific linguistic features highlighted, such as the forms that are associated with formality or with evaluation in a text, or the words that are used to structure the text.

5. Using materials that raise learning awareness. Incorporating elements which lead learners to use cognitive and metacognitive strategies; this way they can discover which are effective for them.

According to O'Malley and Chamot (1990: 44), cognitive strategies "operate directly on incoming information, manipulating it in ways that enhance learning."

Therefore, appropriate activities to develop cognitive strategies are those that require analysing, synthesising, comparing and classifying internet resources of text, images, videos and audio, etc. Incorporating hyperlinked materials to complete a learning task may help learners to develop analysing and synthesising strategies and to support exploration and reflection (C. McLoughlin, 2002), and the provision of links to different types of dictionaries can help learners to contextualise. Materials could also include prompts that encourage the learners to discover language rules for themselves, or to ask the teacher or peers for clarification, or to consult help and other tools.

An important aspect in strategy training is training in metacognitive strategies: skills used for planning, monitoring, and evaluating the learning activity. To develop metacognitive strategies, the materials could offer alternative learning paths, thus encouraging decision-taking. Metacognitive strategies can be fostered with internet activities where learners are asked to identify their objectives, reflect on what they already know and the knowledge they can use to achieve the objective, plan how to develop the task and assign roles (if there are several learners participating in the task), note down their thoughts when working on a task, focus their attention on a specific part of the task, reflect on whether they are following the right path while doing the activity, evaluate the outcome of the activity and assess what they have learnt.

6. Incorporating tools for assessment and feedback. Technology can be used for quantitative and qualitative assessment (C. Morgan & M. O'Reilly, 1999; C. McLoughlin & J. Luca, 2000). Many materials on the internet provide for quantitative types of assessment, in the form of multiple-choice or quiz tests, which inform the users whether their answers are correct. These are usually summative tests that emphasise the product rather than the learning process, and measure the learner's achievement in aspects that can be measured quantitatively, such as grammar or vocabulary. However, the web makes it possible to design other qualitative forms of assessment to provide the learners with feedback on their learning process (T. King & E. Duke-Williams, 2001). Different tools can be used for two types of online assessment and feedback: self-assessment and reflection, and assessment and feedback by peers or by the teacher.

6.1. Tools for self-assessment, self-evaluation and reflection. When working on a task, learners need to take a step back, look at what has been done and evaluate the learning process. Incorporating tools for self-assessment and reflection is a form of metacognitive scaffolding, which helps learners to link the learning process to their objectives and thus motivates them to take responsibility for their learning. There are several ways to provide for self-assessment and self-evaluation:

- Self-tests, by means of which learners can check their own progress and discover where they are experiencing difficulties.
- Self-assessment can be embedded in learning materials (L. Barker & T. Weston, nd). Learners may be asked to stop and reflect on what they have done, or to demonstrate their knowledge throughout the task.
- Learners can self-assess their work by using online forms (C. McLoughlin & J. Luca, 2000). They can be asked to assess their effectiveness in completing a task, and give reasons for their scores, and to reflect on the

difficulties they have found, the reasons for these difficulties, and how they have solved them.

- A useful tool for reflection is an electronic journal, where learners can record their thinking throughout the learning process.
- Electronic portfolios or Webfolios can help learners to develop self-direction and metacognition. Stiggins (1994: 87) defines a portfolio as a collection of student work that demonstrates his/her efforts, progress and achievement and describes this tool as “a means of communicating about student growth and development”. Portfolios can include different types of elements, such as learning goals, work samples chosen by the student, student self-reflection, self-assessment and comments.

6.2. Communication tools that enable the interaction of the learner with their peers and with the teacher. Technology provides communication tools, such as e-mail, forums, chat, bulletin boards, etc, which expand the ways learners interact with peers and with teachers. Teachers can use these tools to take on the role of facilitator or co-operator, providing feedback as and when each learner needs it and thus engaging in a supporting dialogue with the learners. Learners can use these tools to ask for clarification and help in the learning process, and can also be asked to submit their work so that the teacher can monitor their progress and provide feedback.

Peers may also play an important role in supporting learning by providing feedback. Developing autonomy does not mean learning alone. Rather, it involves turning to others in search of support and help and being able to collaborate with others, who are in fact resources for learning (E. Macaro, 1997; T. Murphey & G. Jacobs, 2000). When learners work in groups and examine their learning process together, they can discuss their thoughts and comment on their problems. By using communicative tools, learners can collaborate to complete a task, comment on their peers' work, provide feedback, and answer each other's questions. An important element in peer feedback is to provide the learners with assessment criteria or standards that can guide them when examining each other's work.

Research in computer-aided assessment has stressed the advantages of online peer assessment (C. McLoughlin & J. Luca, 2000; M. Segers & F. Dochy, 2001; P. Davies, 2001): this reduces the workload for the teacher, provides support for the learners and helps the learners by providing feedback to reflect on their own work and copy good practice; the possibility of authentic communication and collaboration motivates the student to engage in meaningful interaction. However, this kind of assessment and feedback also has disadvantages such as the difficulty of getting learners to assess their peers' work in an objective way. Davies (2001) suggests that this problem can be overcome by asking learners to justify their assessment.

Conclusions

When working in an online environment learners need to learn to be autonomous, but they also need support to engage in this process. For this reason, the integration of ICT into a pedagogical approach grounded on the development of

autonomy is a challenge for teachers, who must make sure that they provide enough support to enable learners to learn how to learn online. The support has to be flexible enough to provide the learners with the different tools they may need in the learning process and must diminish when they no longer need it. In order to provide this support, it is necessary to adapt the teaching materials to the new medium and to the teaching and learning conditions arising from the use of ICT for language learning. As Laurillard (1994: 24) puts it: "The basic design principle must be to think in terms of what the learner must do for their part, and how the 'teacher' (ie the multimedia program) should support them in that".

Providing the appropriate support for learners involves: a) helping learners plan their learning and set their own goals; b) helping learners manage the materials (eg selecting materials suitable to the learners' level and appropriate for different learning styles, defining the objectives of each task clearly, incorporating support structures that help learners comprehend the input); c) setting tasks that raise learners' awareness of language and of language learning (eg tasks that train learners in cognitive and metacognitive strategies); d) incorporating tools for self-assessment and reflection and for social interaction, which enable collaboration with others and teacher and peer feedback.

In order to use online learning environments to promote autonomous learning, more research has to be carried out on the kinds of support that are necessary and how to integrate them effectively into the online learning environment. This can only be done by bearing in mind that providing support involves helping the learners complete the task, but without depriving them of control over the learning process.

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