

HELPING STUDENTS BECOME AUTONOMOUS LEARNERS: CAN TECHNOLOGY HELP?

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Abstract

One of the most important challenges facing foreign language teachers is that of making students self sufficient, autonomous learners who can manage their own learning and survive outside the sheltered environment of the classroom. Student perception of needs, knowledge of individual learning styles, ability to set goals, monitor the learning process, and carry out self-evaluation are all needed for independent learning. Technology can deliver the pedagogical support students need. This paper discusses autonomy, student empowerment, and the use of learning styles and strategies in language learning and will show how these can be implemented through a classroom methodology which makes use of tools available through the WWW.

Introduction

Teaching reading skills to EFL undergraduate students in an English for Science and Technology course at Simón Bolívar University in Caracas has always been a challenge, especially as many of the students there have a low proficiency level in English. Their inability to understand texts of a scientific and technological nature written for native speakers often leads to feelings of inadequacy and frustration, which are sometimes reflected in a lack of motivation and a hesitation to take risks. There is a need to make students aware of the hidden potential within each and to find ways in which this can be exploited. When students become more involved in their own learning, taking an active part in making decisions, they might feel a sense of ownership and commitment to the process, and learning might be more meaningful, resulting in better classroom performance. Therefore, teachers need to help students find and develop the skills which will allow them to manage their own learning and survive outside the sheltered environment of the classroom, when the teacher is no longer there for support.

Research done in the area of second language acquisition suggests how this might be achieved. Work in language learning in the last half of the century, has brought us closer to understanding the complex nature of this process and of the learner. Research in areas such as multiple intelligences, individual learning styles and learning strategies (Reid, 1998; Cohen, 1998, O'Malley and Chamot, 1990), motivation (Dörnyei, 2001) and cognition (Schmidt, 1990; Gass, Svetics & Lemelin, 2003) have given us insights into the ways in which different factors

influence learners and the way they learn. Added to this is the move toward learner-centred rather than teacher-centred classrooms (Nunan, 1999), giving students the opportunity to become active participants in the learning process, making decisions with regard to the learning objectives and materials to be used, and helping decide the evaluation process, thus moving toward becoming independent and autonomous learners.

Autonomy and second language learning

But what does this “autonomy” and “independence” imply and how can it be achieved? Holec (1981) defined autonomy as “... the ability to take charge of one’s learning...” while Little (1991) sees it as the learner’s psychological relation to the content and process of learning, his or her capacity for critical reflection, detachment, decision making, and independent action. Breen & Mann (1997) add that autonomous learners must want to learn and develop a metacognitive capacity that allows them to handle change, negotiate with others, and make strategic use of the learning environment. This entails assessing wants, needs, and interests and choosing the best way to obtain these. This can best be attained in an environment in which teachers help students to discover and use effective learning strategies.

However, this about-face in paradigm, from teacher-dependent to teacher-independent is sometimes difficult for students who have been immersed in an educational system which has been predominately controlled by the teacher, who must now give up control and help these students become independent, self sufficient, individuals. Autonomous learning, however, does not mean that the teacher’s input and support is not needed (Little, 1991). On the contrary, the teacher’s role may change, becoming more of a facilitator than an expert, or “holder” of knowledge who transfers information to students, and it is precisely through classroom interaction that teachers can help them become conscious of and learn to make use of, this independence. Dam (2000) speaks of autonomy in terms of creating an atmosphere conducive to learning within the confines of the educational system where learners are given the possibility to be consciously involved in their own learning. Nunan (1997) mentions achieving “degrees of autonomy” which range from making students aware of the learning goals and materials, to making links between the content of classroom learning and the outside world.

Autonomous learners can be characterised as:

- willing and have the capacity to control or supervise learning
 - knowing their own learning style and strategies
 - motivated to learn
 - good guessers
 - choosing materials, methods and tasks
 - exercising choice and purpose in organizing and carrying out the chosen task

- selecting the criteria for evaluation
 - taking an active approach to the task
 - making and rejecting hypotheses
 - paying attention to both form and content
- willing to take risks (adapted from Dam, 1990, Wenden, 1998).

Making students aware of these strategies, as well as incorporating their use in activities done throughout the term, is perhaps the first step toward learner autonomy. This might be achieved through learner training or learner development (Sinclair, 1996), where students learn about the factors which affect their learning, discover the strategies needed to become more effective learners, and in so doing take more responsibility for this process (Ellis & Sinclair, 1989). However, knowing about strategies is not enough, for students should know when, why, and how these should be used in order to select the most appropriate according to their individual needs. The route to student autonomy can therefore be initiated in the classroom by incorporating Nunan's (1997) degrees of autonomy with a raised consciousness of strategy use (Oxford, 1990, 2002).

Context

The class and the procedure described here are part of a compulsory reading program for first year engineering students where the activities are geared toward reading comprehension and vocabulary acquisition. However, they can be adapted for any four-skill course, i.e. the teaching of reading, writing, listening and oral production.

Flow chart for implementing student autonomy in the classroom

Day 1

<p>Objective: Make students aware of:</p> <ul style="list-style-type: none"> • their different learning styles • strategies that they use daily • reflect on the way they learn 	<p>Time: 90 minutes</p>
<p>Materials:</p> <ul style="list-style-type: none"> • Find someone who 	<p>Location:</p>

<ul style="list-style-type: none"> • Learning style inventory • Learning strategy inventory • Scrambled text or • Texts in different languages 	<p>Computer lab or</p> <p>Traditional classroom</p> <p>Complementary skills</p> <p>Basic computer skills</p>
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If the first class is done in the computer lab, students must open an e-mail account e.g. Yahoo), join the class group (e.g., a Yahoo! Group), and learn to create folders.

- After preliminary introductions are made, students are given the “Find Someone Who” handout and are asked to find classmates who can answer the questions on their sheet (http://slrubena.com/alg/Find_someone_who.pdf). The time allotted for this activity will depend on the number of students in class. This activity is used not only for students to get to know each other, but to introduce the topic of different kinds of intelligences and learning styles.
- Students are then asked to share the information they have collected. This may be initiated by the teacher, who as a participant in the activity, can volunteer information or can ask for volunteers from the class to begin. A volunteer can note the different ways in which an individual learns.
- A discussion is then started on the unique characteristics of individuals, the different ways in which each learns and the relationship between different subject matters and learning. For example, questions such as the following can be used to start a discussion:
 1. Do students study math in the same way they do English, or a social science subject?
 2. Is learning to ride a bike or drive a car different from learning an academic subject?
- The “Learning styles” inventory (<http://slrubena.com/alg/styles.pdf>) is then handed out and students are asked to answer the questions. If this is done in the computer lab, an online survey can be used (<http://www.vark-learn.com/english/index.asp>).
- Students take the survey and then discuss the results in groups. For students in a computer lab, the discussion can be done through chat.

If this is the student’s first foreign language reading course, this activity is done:

- The discussion shifts to the objective of the course – teaching reading skills and the question “How do you read in Spanish?” (the students’ mother tongue) is raised. The reason for this is to make the students aware of a process that is carried out unconsciously in their first language and which must now be made conscious in the target language. A list is made and then students can be assigned in small groups to work on the ‘different texts procedure’ (<http://slrubena.com/alg/procedure.pdf>).

If the students have already taken the first course, the following activity is done:

- Distribute a scrambled text activity (http://slrubena.com/scrambled_text_2.htm) and use the same procedure as explained above.

The main purpose of these consciousness-raising activities is to get the students to start thinking about the way they learn. Some are unable to transfer the strategies that they unconsciously use in their L1 to the L2, simply because they are unaware of them. By making students conscious of these, and by reinforcing them during the term, it is hoped that the students will eventually gain enough metacognitive knowledge to be able to use the right strategy when needed.

Day 2

<p>Objective: Make students aware of:</p> <ul style="list-style-type: none"> • their strengths and weaknesses • collect data on student’s perception of academic strengths and weaknesses 	<p>Time: 90 minutes</p>
<p>Materials:</p> <ul style="list-style-type: none"> • diagnostic test • welcome survey 	<p>http://slrubena.com/alg/diagnostic1.pdf</p> <p>http://slrubena.com/alg/diagnostic2.pdf</p> <p>http://www.quia.com/sv/52494.html</p>

- Students are given a survey designed to obtain their perception of their academic performance, the areas they believe require more attention and work, and their suggestions for the coming term (<http://www.quia.com/sv/52494.html>). The survey also asks about their reading strategy use.

- They are then given a diagnostic test to determine which of the objectives of the previous course had been met. This test is not timed and students can leave when they have completed it. The online version of the test can be programmed so that feedback is given. Data can be collected through the use of rubrics.

Day 3

- The quiz is returned to the students, who are asked to make the corrections.
- Students have a private session with the teacher where they discuss the quiz (can be done in an online chat).
- Based on this information and the data obtained from the surveys, the students decide what areas need work, the percentage of their grade to be assigned to each area, and the time for evaluation (<http://slrubena.com/alg/workplan.pdf>) .
- Each student decides the type of material and the activities to be done. The teacher can also give handouts to help students with their work (<http://slrubena.com/alg/gencompwksht.pdf>).
- A progress report sheet is started where the activities done, what has been learnt, and the areas that still need work are tracked (http://slrubena.com/alg/control_sheet.pdf).

The process described above is very important because it gives students the cognitive and metacognitive tools they need to be able to work with the material during the term. We will now focus on how technology can help students become more autonomous.

The use of technology

Communication

To begin with, as Little (1991) has noted, autonomous learning does not exclude the teacher's input, which I consider important for guiding students, especially those who have had little opportunity to make academic decisions previously. The Internet, through chat and e-mail, or voice mail such as Skype (<http://www.skype.com/>), or any messenger service such as Yahoo Messenger (<http://messenger.yahoo.com>), gives them the option of communicating with their teacher or with other classmates, outside of classroom and consultation hours. The knowledge that someone is near with advice or suggestions, or just to listen, provides a physiological boost for the student who needs feedback on his/her performance.

Good source of authentic materials

The Internet is an excellent source of authentic input for students. As the table below shows, there is a wealth of information to be obtained.

Click for [TABLE 1](#)

An essential part of making students independent learners is to help them become aware of their needs, know their learning styles, maximize their strengths, and work on their weaknesses, which is done through interaction with specific tasks and materials. However, this can only be achieved if the learners are willing to work. Interest and motivation are therefore two important factors in learning, and the Internet offers a wide variety of different topics suited to individual tastes and learning styles, as the information can be received through text, audio or video, images and graphics. Students can use any of the search engines to find topics which interest them and the teacher can design generic worksheets to work on special areas.

Students have a choice between working with material designed for native speakers where the student would have an opportunity to receive input beyond their present level, as suggested by Krashen (1985) (http://slrubena.com/alg/Building_an_aqueduct_graphic.pdf) or those especially geared toward foreign language learners with progressively increasing levels of difficulty where learners can work at their own pace, in areas that they consider need to be improved (<http://www.britishcouncil.org/learnenglish-central-grammar-test-landing-page.htm>). By choosing what they consider to be the best option given their perceived needs and goals, the learners are in position to take control of their learning process.

Apart from content, the Internet also offers the teacher many tools that can be used in creating activities for individual student learning. The table below gives some examples of different types of such software available on the Internet.

Click for [TABLE 2](#)

Through the use of sites such as [Quia](#), [Discovery School](#), and [The Study Place](#), teachers can create an online class with materials that can be accessed by the learners at any time. Students enroll in the class and do the activities, and their progress is tracked by the software. They can check on their progress at any point and time and can so monitor their learning, deciding where more work needs to be done. Different types of exercises, besides the traditional True and False, multiple choice and multiple correct, short answers and cloze can be generated by software and new twists to old exercises maintain student interest (e.g. multiple-choice questions changed to “Rags to Riches”, and a sequencing exercise now called “Picture perfect”).

Java scripted software, used in [Hot Potatoes](#), [Question Tools](#) or [Headline Makers](#), can create drag and drop, scrambled words or sentences exercises, and crossword puzzles and flashcards for vocabulary learning. Many of these programs also include options for uploading audio and image files. In the area of vocabulary learning, [the Complete Lexical Tutor](#) not only has a vocabulary profiler to find the lexical density of the text and enumerate the words found on a frequency-based wordlist, but can also be used for checking spelling and creating a cloze. This software can be used by the teacher who needs to determine the level of difficulty of an article that may have been selected by the students, in order to help them make decisions with regard to the texts they should read.

Some of these programs also give teachers the option of including clues, multiple tries and instant feedback in their exercises. Through these, learners can have several attempts at solving the puzzle or use the “clue” option either to activate other schemata which might help them or to

check their hypothesis before giving the answer. With instant feedback, teachers can either give the correct answer or ask questions that will lead the student to use other strategies and to process the information at a deeper, more cognitive level (St. Louis, 1999). Once more, the use of different types of activities, with input being received by the learner through a visual, aural or kinesthetic medium, not only caters for individual learning styles, but may also lead to the information being processed on different levels in the learner's cognitive system and so increase the likelihood that it will be stored in memory. Learners can also use software to create their own activities and in so doing participate actively in their individual learning process by setting their goals, choosing the material, designing the activity, and evaluating their knowledge. In this sense, learners will have achieved the different degrees of autonomy mentioned by Nunan (1997).

When designing activities teachers should look at the following:

Designing work for autonomous learning within the classroom

The following is an example of how software can be used to create activities, which are incorporated into a lesson within the constraints of the classroom and the objectives of an official language program. The texts were chosen because they illustrate rhetorical functions which should be taught in this course.

People and colour (<http://slrubena.com/alg/colour.htm>)

Materials:

Two texts taken from the internet:

- Psychology of Color, at <http://www.factmonster.com/spot/colors1.html>
- What colors mean, at <http://www.factmonster.com/ipka/A0769383.html>

One reading taken from an ESL reading text:

- People & colour - taken from Sonka (1981, pp. 26-33)

Tutorial on adjectives

Objectives:

- reviewing adjectives
- skimming for main idea
- scanning for specific information

Reading tasks:

- students scan texts to find the different meanings of colours, and predict if the meaning of these colours will change in the future.
Meaning of colour (http://slrubena.com/alg/meaning_colour.pdf)
- students scan text to find what different colours symbolize to different cultures throughout history: Compare what the same colour means in different countries.
Colour symbols (<http://slrubena.com/alg/coloursymbols.pdf>)
- students use information from the texts to advise clients on the best colours to be used in certain situations, and give reasons to support their choice:
Colour advisor (http://slrubena.com/alg/Colour_advisor.pdf)

Vocabulary tasks:

- students look up the meaning of adjectives that describe emotions.

Interactive activities:

- Crossword puzzle (postreading for What colours mean)
- Drag and drop vocabulary activity (What colours mean)

In this example, students were given a choice of readings and activities. Images were used to introduce vocabulary and students were asked to look up the meaning of emotions whose meaning they wanted to know in English. They were also supposed to use the new knowledge they had obtained from the text to advise clients thereby voicing their views on the topic.

Conclusion

For the past two years, students in my English for science and technology reading class have been making use of the immense amount of information available on the Web and developing their reading skills through computer-based exercises that capture their interests and motivate them to interact with the text. Here are some of their comments, taken from <http://slrubena.com/alg/comments.pdf>.

What students think about choosing their own activities:

- me parece q esta bien porque asi ellos escogen sus ejercicios y logran tener varias oportunidades durante el curso. En fin... Muy provechoso

I think that it is good because in that way they can choose their exercises and have several opportunities during the course ...

Their thoughts on using computers:

- I think it's very dynamic and faster, first because we don't have to write like always on a paper, we have everything in only one place... we get our score immediately in the case of the quizzes... I like this way to learn and enjoy my class.. it's better and easier to do things when you like them and I like to work on a computer .

And on the activities:

- El mecanismo utilizado mediante las computadoras es efectivo pues me permitio realizar las actividades sin aburrimiento y con mas dinamismo, ademas de aprender de acuerdo a imagenes y actividades q ofrecen facilidad de retencion, me parece q es el mejor mecanismo para entender el ingles.

Using the computer is effective because the activities are not boring, they're more dynamic and the images and activities help me to remember...I think it's the best way to learn English.

As can be seen, using the approach described here, student exposure to the language is greater than with printed material and there is more opportunity for them to practice different kinds of exercises outside of the classroom. They have started to take control of their learning by participating in decision making with regard to materials, activities and evaluation. It is expected that they will soon be contributing their own activities to the class and in so doing reach Nunan's (1997) final level of autonomy.

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