Research Article

IMPROVE LEARNING THROUGH MAKING USE OF THE IT ENVIRONMENT: THE INTERACTIVE QUIZZES

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ARTICLE INFO	ABSTRACT
	Faced with the difficulties to success experienced by students at the university. Learning technologies may offer interesting solutions. Indeed, thanks to their interactive capacities, they have the potential to guide students to better learn. This research has been based on a study on the teaching of the "language and terminology" module and shows that the regular insertion of quizzes into a digital work environment improves students' learning performance. This educational strategy is based on the provision of face-to-face classes and quizzes in Moodle, after each course. The study concerns the teaching of specialized French to students in scientific disciplines at the Faculty of Sciences Ben M'sik-Casablanca.

INTRODUCTION

Problem

In Morocco, students in scientific disciplines, who are not specialists in languages, are required to continue their university studies in French despite a six-year pre-university training cycle in Arabic language. These students would not need to learn "French" but "the essential of French", the latter is necessary in order to enable them to continue their university studies in an optimal way.

The identification of difficulties facing these students prompted the Ministry of Higher Education, Scientific Research and Professional Training to propose a module of French language entitled « Language and Terminology », during the first two semesters of the university education, in order to help them better understand the change in language of instruction. The module is aimed at meeting the expectations and needs of students, especially regarding the learning of French in its functional aspect: to learn what is essential in French and not the entire French language, in order to make a specific use of it during their university education (understanding of courses, note-taking, interaction with teachers, writing of research papers, etc.).

Our Problem is part of a strategy to improve the performance of this teaching and make it more dynamic. The aim is to promote active learning, to develop the autonomy and strengthen involvement of students in the learning of French language. To answer our problem and optimize the objectives of this teaching at the Faculty of Sciences Ben M'sik, we have been thinking -as a teacher- about innovative learning technologies.

Indeed, innovating in the university context means bringing a change aiming at improving students' learning through a transformation of teaching practices in order to promote student success, for example by targeting a deeper, sustainable and transferable learning, but also by encouraging students to develop a critical mind towards the subject and become themselves producers of knowledge (Béchard & Pelletier (2001); Bédard & Béchard (2009).

The aim is to make courses more dynamic, to promote interactions between face-to-face courses and distance courses

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thus optimizing the learning. The combination of "dynamic" face-to-face courses and a educational strategy integrating the Moodle platform is a potential solution to improve the performance investment / knowledge gained .This strategy is based on interactive quizzes as a learning tool. Quizzes may be very effective as a learning tool (Stéphane Bravard, 2005). Questions can promote learning (Will Thalheimer, 2003).

The objective of this work is to answer the following questions:

1. How can Learning Technologies be used in the teaching of the Language and Terminology Module to give a fresh impetus to the specialized teaching?
2. Which teaching scenario can be adopted to boost the teaching of the module entitled languages and terminology?
3. To what extent can online educational activities like « quizzes » help students to change their way of learning and promote their autonomy?

METHODOLOGIE

Within the context of this work, we would like to boost our way of teaching through using quizzes as adequate arrangements based on active, incentive and interactive pedagogies. For this nomenclature, we drew inspiration from Lesne's works (Lebrun, 2005), which, in addition to

pedagogical ways of working (PWW) with a transmissive and normative orientation that distinguish between (PWW) of the incentive type with a personal orientation and those of the appropriative type, further based on social interactions (Lesne, 1977).

The Moodle platform

Moodle is an online learning management system under a free license used to publish courses and educational activities. The creation of these resources requires the use of modules called activities (text, Multiple choice, tests, forum, etc.). Moodle also enables the teacher to follow-up the activities carried out by his students. The educational strategy proposed in this study is essentially based on the multiple-choice questions module.

Quizzes to promote exchange and attention

Innovating a course through an audiovisual sequence or reading an online course material is widely known, but what performance can be expected? (knowledge gained / investment) of this kind of methods, for a very heterogeneous student population, especially in terms of learning and motivations?

To answer this question, we have adopted an innovative strategy, this strategy involves explaining the process to students, a four-step process:

Figure1. Screenshot of activities offered to students

Step 1: Note-taking and interaction with the face-to-face teacher;

Step 2: Quiz to be completed in the Moodle platform;

Step 3: Download of course materials after the completion of the quizzes;

Step 4: Preparation using Quizzes prior to the final exam.
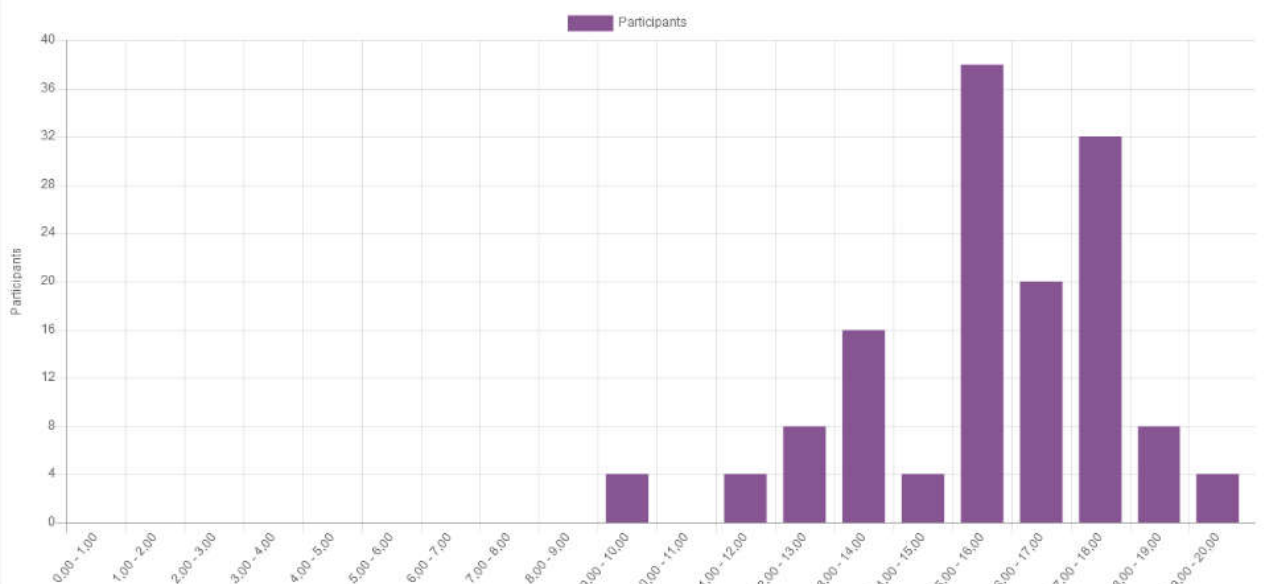
RESULTS AND ANALYSIS

SMAI by Mathematical Sciences and Computer

The subjects of our sample are university students in initial training. In total, there are 67 students enrolled in the first year of the SMAI department, for the academic year 2016-2017, who are attending the face-to-face activities of appropriation of the language and terminology course of the second semester.

The teaching scenario adopted

The course is structured according to the principle of pedagogical alignment, the pedagogical alignment is thus based on a scenario aiming at developing the student interactivity and autonomy.

The teaching scenario is based on the quiz where it holds a special place, an explanation of the teaching method is given to the students from the first session of the course by making it clear that the course materials will not be made available only following the answer to the quizzes in the Moodle platform (restrictions). Note-taking is strongly recommended in order to better respond to the quizzes.

Answers to the quizzes are not available before the final exam and access to quizzes is limited. Before the final exam all quizzes are available for training and answers to the questions are also made available.

Step 1: Note-taking and interaction with the face-to-face teacher:

The first step of the educational strategy is based on the provision of face-to-face classes. We have organized the content of the course in two ways to better request the activity of learners. During the session, the activity of the learners is requested through taking notes of courses without any support provided to the students. This means that they are embedded in a content presented in small fragments.

Graphique 1 Distribution of student scores in the Moodle platform

Figure 2 Example of courses to download

Each fragment is followed by one or more activities requiring the learner to put into practice the fragments that have just been presented to him. These activities are presented in the form of exercises (written or oral comprehension).

Step 2: Quiz to be completed in the Moodle platform:

At this step of the educational strategy, the activity of the learners is requested through global activities. Activities are grouped at the end of a chapter or a coherent part of the course. These activities consisted of a series of self-correcting exercises in the form of quizzes under the Moodle platform, which can give the learner a clear and immediate idea of his level of proficiency of the course.

At that time, access was limited, i.e, we left the test accessible one week beyond that time the students could not access it. These quizzes are rated, in the form of a continuous assessment and require students to take notes during class sessions. The scores of these tests were counted as a bonus. That means that they will only be considered if they increase the average.

Step 3: Download of course materials after the completion of the quizzes;

Once the student completes his test, he can download his course online, this requires him to perform the test and consequently build his learning.

Step 4: Preparation using Quizzes prior to the final exam

About a week before the final exam, we gave an activity (text and questions in the form of quiz) allowing students to discover all the basic notions of the program studied during the semester. During this preparation, the quiz feedbacks are made available, it is a way of support for the students to help them preparing for the final exam, thus these thoughtful pedagogical methods allowed us to engage our students (first year) on the path to success.

DISCUSSION OF THE RESULTS

We realized in this experience that students have massively participated in this teaching method, 90% have answered all the tests proposed. The assessment of students was very positive. This arrangement encouraged them to work regularly and to ask questions whether at a distance or in the classroom. These quizzes have also allowed us to identify very rapidly students who will need support and remediation.

We also noted that the attendance rate was high during the course session, attending the course and taking notes allowed them to answer the quizzes. Furthermore, the assessment of the learning of the language was more positive. It can be considered that the time devoted by students to answer quizzes, check the external resources and finally exchange are all potential vectors of acquisition.

CONCLUSION

The objective of the present study was to identify the positive effects of the quizzes we had observed during the experience, a simple interactive solution, such as interactive quizzes, have the potential to reduce some learning challenges faced by students at the university.

These quizzes allow you to address actively the content of a course, they can therefore have a very stimulating effect on the learners' motivation. We found a real involvement and motivation of the learners, where their participations and contributions can be collected and analyzed by the teacher, for feedback purposes.

The student relationship was different (meeting new students, more communication) from that of a traditional course where the physical distance reflects a pre-existing psychological distance to communication (Y. Guyot, 1979).

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