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ASSESSMENT OF FACULTY TRAINING PROGRAM FOR THE USE OF E-LEARNING PLATFORMS IN THE UPV-EHU: ANALYSIS OF THE CURRENT USE

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Abstract

This paper shows the results of a survey carried out among faculty member that use Moodle to support their classroom teaching, in the University of the Basque Country UPV/EHU. The aim of this work is to determine:

- a) How Moodle is being used
- b) Whether the training program helped them improve their teaching by the use of Moodle.
- c) What are the further training needs.

The results showed that the use of the learning platform was mainly oriented to present materials or resources, followed by the attempt to improve the communication with the students and to monitor and grade assignments. We also found that training faculty members only on courses for a didactic use of Moodle, was most effective in the use of collaborative learning strategies. The more trained teachers demand further training in the didactic use of Moodle.

Keywords: training staff, Moodle, training needs, e-learning, technical-didactical approach

1 INTRODUCTION

The first uses of e-learning were to play the teacher's traditional tasks: explain a few contents, make questions about them and check the results. The interest of e-learning applications arose at the prospect of an individualized instruction, primarily tutorial type.

With the Internet arrival, new possibilities were opened, so at present the e-learning can take many forms: from the simple access to the information of a web site, to the interactive and multidirectional communication, cooperative and collaborative work, increased ease of use in data storage, creation of online pages, creation of practice communities, etc. Therefore, the current e-learning should not involve only the knowledge in the direction of traditional learning processes, but rather, should create situations and offer tools that stimulate the cognitive and collaborative potential of students [1].

To this end in the last decade countless Virtual Learning Environments (VLE) or Learning Management Systems (LMS) have been developed. Originally designed for the development of distance learning courses, currently, they are also used by educational institutions to enhance and support classroom teaching. Thus, the teacher has a virtual space in addition to the face-to-face classroom, to complement and support their teaching. Furthermore, the use of VLE in classroom can also promote student-centered instruction and result in a shift from traditional instruction (often called "transmission") to more constructivist-compatible instruction [2]. European Higher Education Area (EHEA) also has meant a change in the approach to teaching in the same direction.

In a study on prospects of the students on VLE, they indicated that the most useful VLE components were the discussion board and assessment tools, where they could exchange ideas with their peers

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and their teachers and evaluate their knowledge easily by receiving quick feedback from their tutors. The students preferred their learning to be focused on collaborative learning supported by technology, as the interactions between students and teachers were enhanced by sharing and distributing the knowledge among them [3].

Regarding to the faculty development in the use of VLE two types of actions should be take into account: firstly, providing basic knowledge of the VLE's technology and their tools, and secondly training based in educational theories (student-centred instruction), so that teachers could develop online course using a range of features of a selected VLE, and not just as repository of notes.

A training strategy to achieve both objectives is to offer a two-stepped training program. Many Universities have trained their faculty member in this way. But, what was the result? Are teachers using VLE to built activities of interaction, cooperation and construction or are they using them primarily as repositories of notes? Watson [4] reported that the introduction of ICT resources to schools seemed to have relatively little effect on the way of teaching. On the contrary, a case study of 47 teachers carried out by Dexter et al. [5], noted that the majority of teachers, classified as constructivist, believed that computers helped them to make the change to more constructivist practices, but computers were not the catalyst for change. Change was internal in origin with the most important factor being teacher's reflection on instructional practices. So, what training strategies can be more effective to achieve a more interactive use of virtual environments?

2 FACULTY TRAINING PROGRAM IN THE UNIVERSITY OF THE BASQUE COUNTRY (UPV/EHU).

The University of the Basque Country (UPV/EHU) started using Moodle as a VLE in 2004 to enhance and support classroom teaching. Immediately, a Faculty Training Program was designed and offered, under the auspices of the Educational Advisory Service (SAE / HELAZ), based in two consecutive courses [6]:

- Moodle Basics: Designed to introduce new users to the basic use of Moodle: understanding typical layout and navigation of a Moodle site and course, learning basic vocabulary, working with the Moodle editor, managing contents and files, ...

The course was arranged in two sessions of four hours each (8 hours total). Participants used the platform first assuming the role of the student, so they become familiar with how their students will navigate the site; create a profile; understand the location of the features and the steps they need to take in order to complete a particular activity; update their messaging settings; subscript to a forum, etc. The questions they had as an end user would most likely be the same questions they would receive from students as they ask for navigation support. Afterwards, they assume the role of the teacher so they can manage their course in order to add resources and basic activities.

The course was focused from an operational point of view, similar to the approach of an instruction manual.

- Didactic use of Moodle to support classroom teaching. The course was focused on guiding teachers to use Moodle with the didactical approach for which it was designed, e.g. social constructionist pedagogy, rather than putting resource repositories and/or online exercises. We focused on the best practices in Moodle to connect with students in a personal way that addresses their own learning needs, and moderating discussions and activities in a way that collectively leads students towards the learning goals of the class. The participants learned creating documents with electronic format, activities to promote collaborative work and communications among students, activities for self-training, etc. They also learned grading and making feedback. Examples of best practices were shown and discussion among participants was encouraged.

The workshop was arranged in three sessions of five hours each (15 hours total). Participants were asked to complete tasks both inside and outside of classroom. At the end of the course, the participants have to submit a didactic sequence in Moodle, in order to reach one or more learning outcomes.

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The training program was implemented gradually, starting with the basic course, and later offering the course with didactic approach. Up to now 1400 faculty members have participated in the training program.

The trainers team consisted of 12 faculty members of different knowledge area (science, engineering, humanities, social sciences,...) expertise in using Moodle in their teaching subjects. Each workshop was conducted by two trainers, in order to share experience and opinion from different points of view.

3 HOW MOODLE IS BEING USED FOR TEACHING IN UPV/EHU.

After six years of being using Moodle in UPV/EHU, a survey was conducted in order to know how Moodle was being used by the faculty, to analyze the influence of the training received, and to detect further training needs. The study was conducted through a questionnaire sent by email to 2660 teachers that were registered in the Virtual Campus of UPV/EHU. The Virtual Campus is the entity that manages the Moodle server. The questionnaire was answered by 353 faculty members (22%) out of the 1603 that were really using Moodle in their classroom.

Firstly, they were queried about the type of training received. They were asked to mark the Moodle's tools they use in their courses (the tools were grouped into four categories: resources, communication, evaluation, and collaborative development). The questionnaire included claims about the approach followed in the use of Moodle and about the participation and interaction of students. Teachers should show their level of agreement on a 1-5 Likert scale. They were also queried about further training need, through a number of options. Finally, the survey included the possibility of making comments or suggestions on training or any aspect covered in the survey.

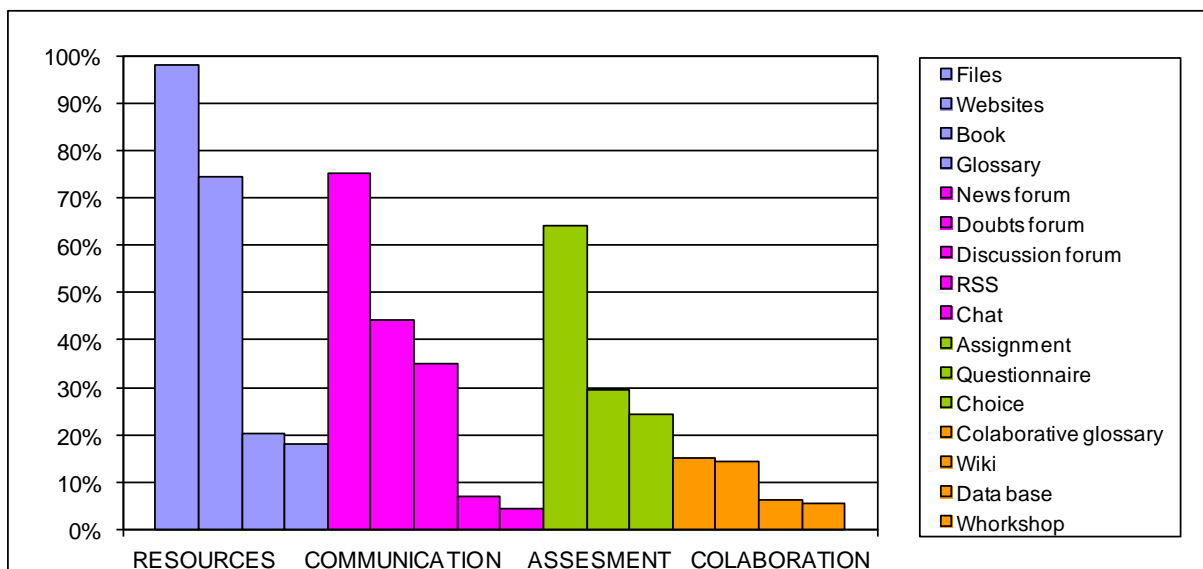


Fig. 1. Percentage of use of Moodle's tools in survey.

The results showed that the use of the learning platform was mainly oriented to present materials (RESOURCES), through all types of files and links to websites (98% used them); followed by COMMUNICATION tools (news forum, 75%; doubts forum, 44%; and discussion forums 35%), and ASSESMENT tools such as, questionnaires (30%) and assignments whereby student can submit any digital content (64%). COLLABORATIVE tools (such us wikis, glossaries...) were hardly used (15%).

The trend reflected in the Fig. 1 is confirmed by the results obtained in the average of the items shown in table 1:

Table 1. Items about approach of using Moodle.

I use Moodle to provide course contents to students (it is a space for the knowledge transmission)	4,22
I use Moodle to enhance communication with students	3,72
I use Moodle as a learning tool though tasks and activities coombined with the in-class activities	3,66
I use Moodle to promote collaborative learning and social interaction	2,85

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The survey reflected remarkable high level of satisfaction among faculty, as long as they believe that the quality of their courses had improved. Although Moodle was designed to promote social constructionist pedagogy (collaboration, activities, critical thinking, communication, etc.), rather than exclusively to present materials, teachers emphasized the improvement that implies the possibility of offering students animated resources. They also emphasized improvements in communication with students through forums, but realized that they do not work automatically, and that should be framed in a particular teaching style and defined its objective.

We would like to remind that this data correspond to the answers given by the 13% of the faculty registered in Virtual Campus. In 2011, the Virtual Campus provided us with new data about the use of Moodle tools. At that time, 2685 teachers were managing 500 virtual courses (2.5 classroom by teacher), and involving 41.841 students. The data provided by the Virtual Campus (Fig. 2), indicated that Moodle was being used mainly to present resources (links to files or Web sites, 78%) and to monitoring and grading assignments (30%). The forum is 100% because all the courses have a default news forum. Less than 10% of courses in Moodle had a remaining tool, which are those more related with active and collaborative learning.

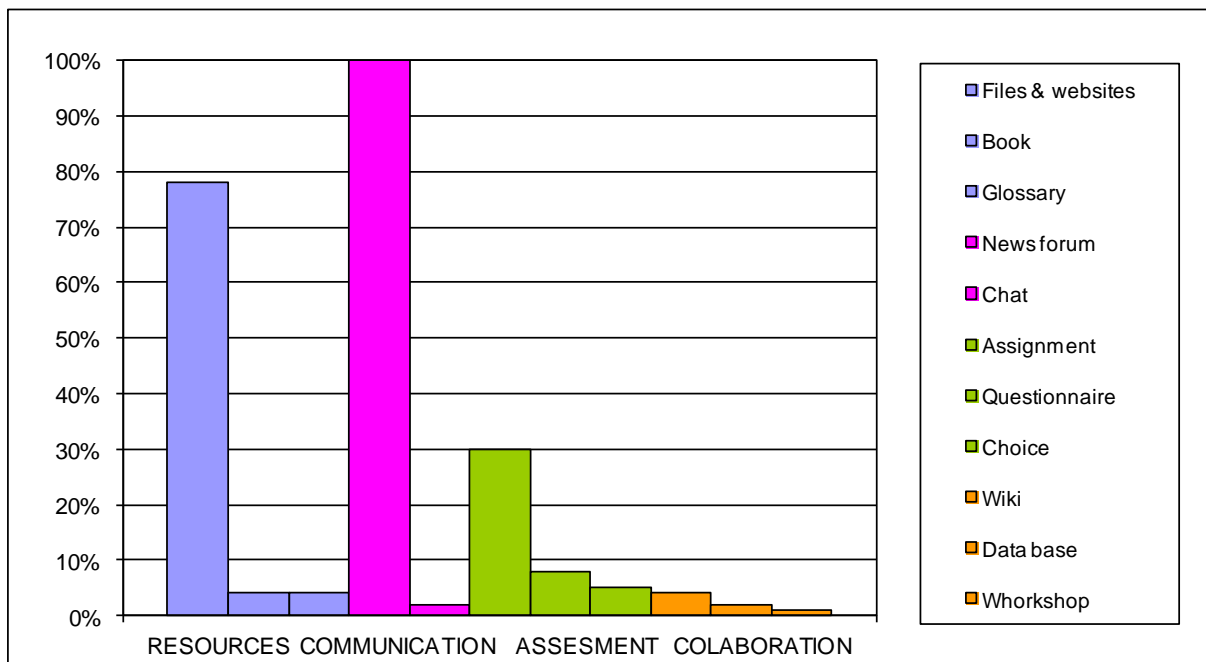


Fig. 2. Percentage of use of Moodle's tools in virtual courses.

3.1 Influence of the training in the way of using Moodle

The second objective of the survey was to analyze the influence of the training received in the way of using Moodle. For the analysis of the data we have established three categories of training: faculty who have not received training or are self-taught (category "no training"), faculty who have attended only the workshop Moodle Basics (category "Operational"), and faculty who have participated in the workshop didactic use of Moodle (category "Didactical"). Some faculty member attended the "Operational" course and later on, the "Didactical" course. Conversely, some faculty only attended to the "Didactical" course, without attending the "Operational" course.

Fig. 3 shows the percentage of use of each Moodle's tool according to the training received.

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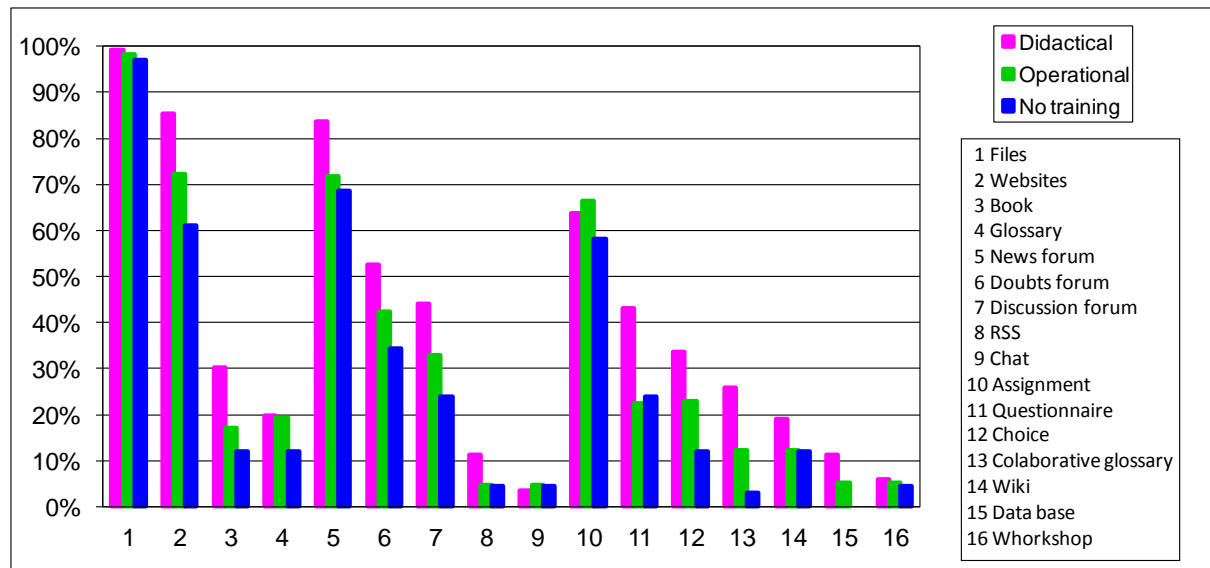


Fig 3. Percentage of use of Moodle's tool according to the training received

As expected those who received more training also used a wider variety of tools, although the difference was minimal in the use of some particular tools (link to files and webs, RSS, chat or workshop).

Fig. 4 shows the difference in the use of Moodle's tools between those who have been trained in a "Didactical" approach and those who have been trained only in a "Operational" approach.

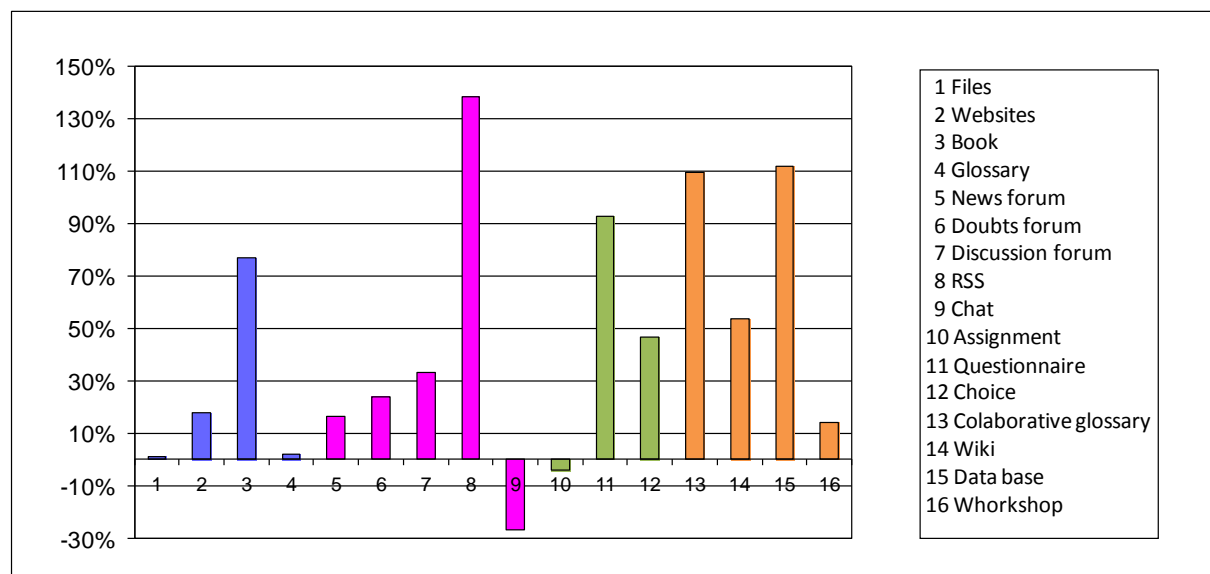


Fig. 4. Difference in the use of Moodle's tools between those who have been trained with a "Didactical" approach and those who have been trained only in a "Operational" approach.

Little difference was accounted for the tools used to present materials (RESOURCES) except in the "Book", which is used by 70% more, among faculty trained in a "Didactical" approach than those who have been trained only in a "Operational" approach.

Among COMMUNICATION tools, the biggest difference was observed in the use of the RSS feed. The use of Forum (dependeing on the type of Forum) also was higher among faculty trained in a "didactical" approach. The influence of this training style was particularly remarkable in the use of tools for ASSESMENT AND COLLABORATIVE learning.

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These differences supported that faculty should be trained in a “didactical” approach in order to change the way that moodle was currently used (as a repository of materilas), to promote interaction between the students and the collaborative and constructivism learning.

3.2 Are different course formats necessary?

As well as in other Universities, the strategy of training staff on Moodle consisted in several steps: they started with courses about basics with a “operational” approach, and followed with workshops on advanced tools and their best use from the “didactic” point of view. A question to consider is whether it is necessary to go through all these steps so that staff could develop online course using a range of features of Moodle with a constructivism approach (not just as repository of notes). We analyzed the data by separating the category "didactic" into two groups: faculty who only received a course with a didactical approach (“didactical”), and faculty who first received a “operational” course and subsequently the “didactic” one (“operational+didactical”). Fig. 5 shows the use of Moodle’s tools by the staff trained differently, taking as a basis the category of those who have only received a “operational” course:

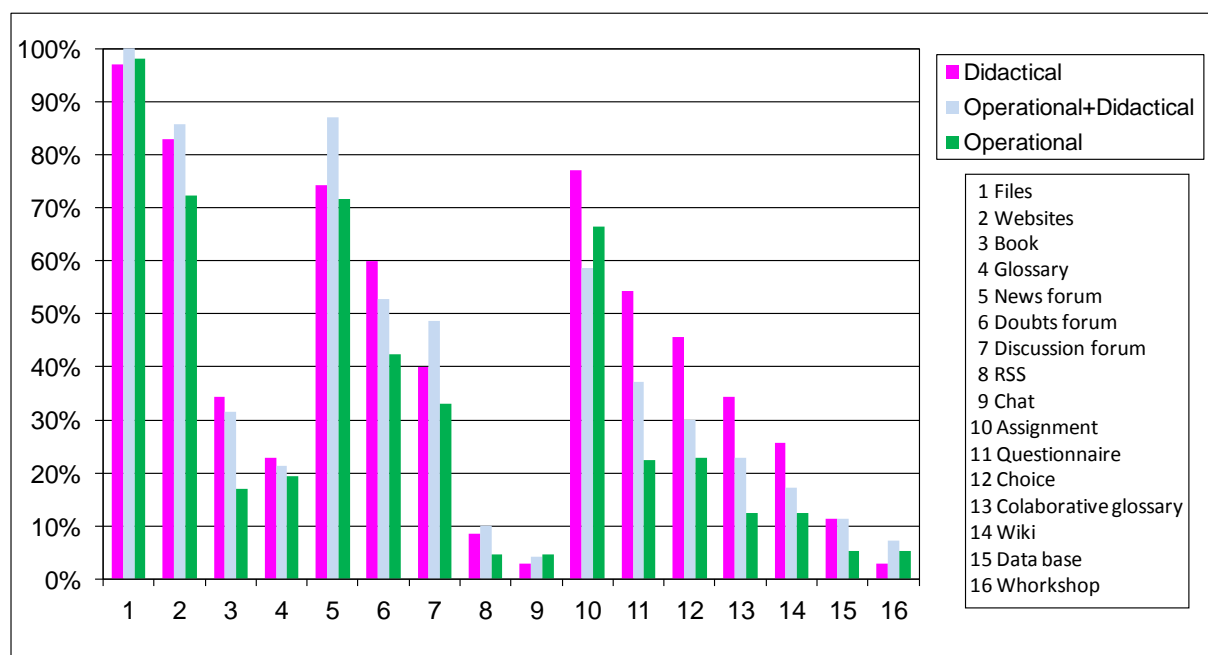


Fig. 5. Use of tools according to the training received

Comparing the groups “didactical” and “operational+didactical”, there were no differences in the use of tools for RESOURCES AND COMMUNICATION. However, in the ASSESMENT and COLLABORATIVE development tools, its use was higher among those who in the category “didactical” with respect to “operational+didactical”. An outstanding result was found. Although we believed that those who had first received “operational” training, they would be eager to find didactical best practices, since they had some time to practice with the platform before attending the “didactical” course. However, better results were obtained among those who were trained only in “didactical” course.

One possible explanation could be that those who receive a “operational” course implement its virtual classrooms with a more traditional approach, that is, as a repository of resources. After receiving “didactical” course did not go further. However, the staff attending only the “didactical” course was advised from the very beginning that Moodle was created to promote learning by interaction, cooperation and construction.

If this hypothesis were true, the best training approach, to make effective Moodle, as a tool to promote constructivist and cooperative learning in their classroom, would be that based on didactical issues, with some operational analysis, and also offering different approaches to the use of them, showing examples of good practices and promoting reflection on the teaching practice.

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3.3 Further training needs

To try to determine the further training needs for the faculty, the questionnaire included a multiple choice question. The result is offered as a percentage in Fig. 6.

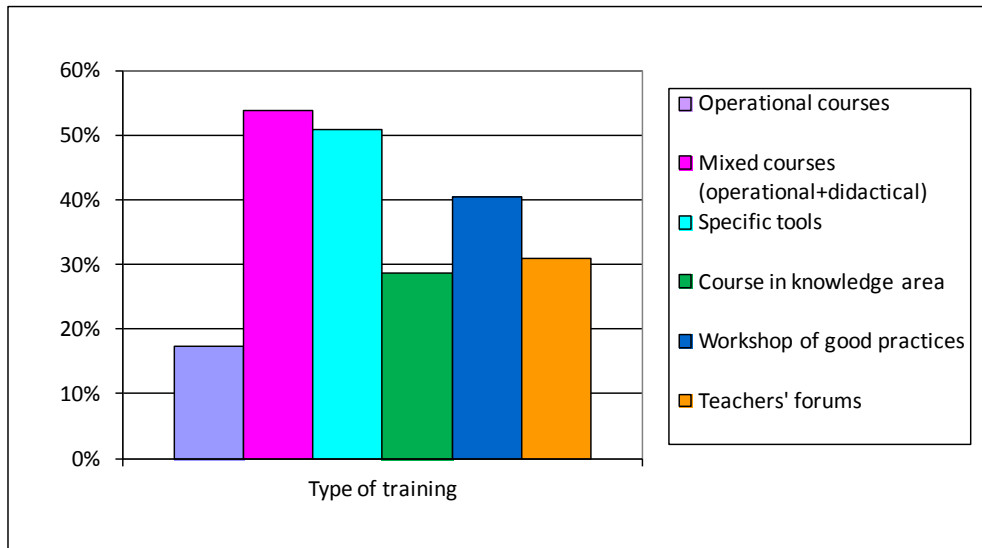


Fig. 6. Staff preferences about the type of training

Approximately half of the participants (53.8%) prefer mixed courses that combine operational aspects and didactical use of tools, compared with only 17.3% who prefers courses on operational description of the tools.

Courses on specific tools, such as questionnaires, dynamics of forums, workshop, etc., received high score (51%), followed by the workshops on exchange of teaching practice experiences (40.5%). Almost one of every three teachers (30.9%) also demand a Faculty Forum to find solutions to operational difficulties and to engage in discussions concerning to challenges in the online classroom, best practices in teaching, pedagogical innovations and emergent technologies that facilitate learning.

Fig. 7 show the training preferences shown by the participants grouped according to the received training.

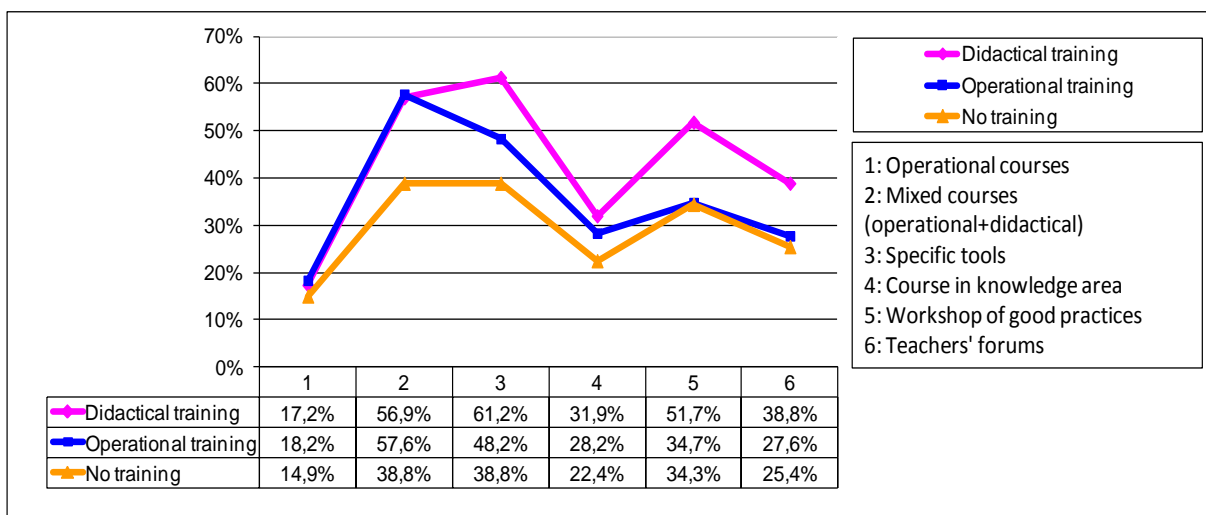


Fig. 7. Needs according to the training received

In the first two options (“operational” courses, and “operational+didactical” mixed courses) there were nearly no difference between those who received “only didactical” training and who have only received “operational” training. The latter chose as first choice courses that combine operational and didactical training, and as a second option, courses on specific tools. The staff trained in a didactical approach demand as first choice courses about specific tools, followed by operational-didactical mixed courses.

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It is noteworthy that those who have received less training were those who chose all the options in lower percentage. It was likely due to they are unaware of the tools and their potential for better learning. They probably believed that Moodle can only be used as a repository of notes and resources. Conversely, those who received training in “didactical” practices are who mostly demand workshops on exchange of teaching practice and a faculty forum (51.7% and 38.8% respectively). The relative difference in percentage with respect to the rest of the staff is 49% and 40%. Perhaps, the fact of being trained in the best practice in teaching (by using Moodle), make them to be eager for further learning.

4 CONCLUSIONS

The results of a survey carried out among faculty member that use Moodle to support their classroom teaching, in the University of the Basque Country UPV/EHU, showed that the use of the learning platform was mainly oriented to present materials or resources, followed by the attempt to improve the communication with the students and to monitor and grade assignments. Tools for collaborative learning are hardly used. Then, the use of platform is far from the didactical approach for which it was designed, e.g. social constructionist pedagogy, rather than to use as web page to collect notes and other resource.

The influence of the training courses is evident in the way in which Moodle is being used for teaching. When comparing the answers of faculty member who took the “operational” course versus those who took the “didactical” course, the use of collaborative glossaries, wikis and data bases increased up to 109%, 53% and 112% respectively; the use of tools for assessment, such us questionnaires and subjective queries also increased up to 92 and 46%, respectively.

However, when comparing the answers of the faculty members that attended both courses (“operational” and “didactical”) to those who attended only the didactic course, the use of tools for the assessment and collaborative learning was higher among the latter. The use of tools to present materials and to communicate was quite similar. Then, unlike what we believed, training faculty members only on courses for the didactic use of Moodle, was more effective in the use of collaborative learning strategies than training them a two step program (operational + didactical use). Then, the most effective training strategy would be a course focused in a strong didactical use of the software, showing examples of good practices and making an analysis and reflection of the convenient use of each tool within the field of knowledge of each faculty.

Finally, the staff trained in didactic practices mostly demands workshops on exchange of teaching practice, on best practices in teaching and a faculty forum.

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