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November, 18th-20th 2013, Sevilla

<http://iated.org/iceri2013>

Oral presentation for a fifteen minute session

Learning on an online campus

Students team building through online interactions with a LMS¹

Abstract

This oral intervention in Spain will present French distance education management : how LMS is supervised in order to train students. After a brief methodological introduction, I will show results consisting in the description of LMS management whose aim is to improve the learning activity of distance students. I will explain how interactions and “coopetition” are fundamental in students team building. I will end up with a discussion around three notions : effectiveness, efficiency and efficacy in learning. These three notions rely on group interactions in order to reach training objectives.

Keywords

Management – Education – Distance education – Team building – LMS

¹ LMS : Learning Management System

Method

My activity in French public education is twofold : I am both a training manager in distance education and an education scientist. I split share my time between two parts : a day work on Learning System Management supervision ; an off-work university study about distance education. In my education sciences researches, I use normal social sciences participatory observations (stemming from ethnography field techniques) and doctoral philosophical analysis (chiefly ethics, aesthetics and epistemology). The results of my latest researches can be found on this website : <http://educations.voila.net> ; written both in French and English. On the same website, an article in Spanish can be found with the Google Scholars link: it is about the use of new technologies in small organizations (Start-ups of the years 2000-2004) – studying carefully publishers on personal digital assistant of those times.

As to what concerns this presentation about learning on an online campus in distance education, I collected empirical data through a fieldwork study in a French distance education institution equivalent to Uned (Universidad nacional de educación a distancia), here in Spain. On the other side of the *Pireneos* mountains, in France, I was hired as a training manager; responsible for a few websites designed as online campuses. As a manager, I hire teachers to moderate forums and to give online tips and tricks to students. I pay a special attention to students involved in an online learning process, the way they interact on the LMS and their group numeric dynamics. I will therefore describe students online team-building, using the point of view of what the indigenous within the organization call “management”. As an education sciences researcher at Conservatoire national des arts et métiers (Cnam, France), I use these data to analyze students team-building on the platform and compare them to literature about teambuilding and groupwork² in online environment.

Results

Students interact with online course contents : they read material, complete sets of exercises given on the website, answer recorded questions from teachers to assess their understanding of the reading material, and so on. The LMS manager’s job, in this case, is to check that the website is correctly provided by the production department (all webpages work out), to guarantee the quality

² I used Kurt Lewin’s analysis of group dynamics but also more recent articles such as Cheng C.Y. and al. “The effects of Team-based learning on learning behaviors in the maternal-child nursing course”, in *Nurse education today* (2013) and Yu-Ling Lin and al. “The values of college students in business simulation game: a means-end chain approach” in *Computers & Education* (2011)

of the reading material and the exercises available on it and provided by teachers (whether they belong to the organization or are commissioned), to be sure that the number of students enrolled by the registration department reaches an optimum (assessed by a financial analysis).

Students also interact with teachers on an online forum, where they can ask for pieces of advice about the exercises and also for general information about their training. This forum is moderated and an answer is by-rule provided within 72 hours. Therefore, teachers and forum moderators will visit the LMS platform to keep up with the rhythm of questions and answers on a daily basis. The LMS manager has to hire the proper number of teachers so that all questions are answered without any loss.

Finally, students interact with other students on the same platform, a place where they exchange tips and personal experience about the training. They can answer each other's questions and wonderings, even before the teacher provides his / her own official answer. Hence the forum has an almost autonomous life : many subjects are launched, questions, answers, suggestions, comments and tips fill each page. Teachers follow the conversations and check that forum's ethics, set by the manager, are respected. If not, they alert the manager who will exclude any troublemaker.

In case of lack of animation, or simply to launch the first debate, teachers are incited by managers to spontaneously propose an exercise. It can be asynchronous : a teacher asks his/her question and comes back on the forum the day after to see and assess the results. It can also be synchronous : an appointment is given at a precise hour and all learners can chat together on the forum as soon as the teacher has asked a question. This is a bit harder for the teacher to handle since it can be very lively, depending on the number of students online. This teaching technique is closer to *virtual classrooms* that I present in another speech here in Sevilla. The question of timing is essential: most of the students have a daily work, most teachers don't work during weekends and therefore synchronous sessions have to take place early in the evening (which, contrary to Spanish uses, is mostly between 6 and 8 pm in France).

It is through these interactions with humans (teachers, other students) and non-humans (website, files to read and exercises to do) that a learning group is built. The student acts by filling in a checkbox, the website software automatically answers and provides the right answer with an explanation. The student hands in an electronic file, a teacher reacts by a correction of it, and grades are posted on a specific software where every student can compare their results with basic statistics of the group's grades (average, maximum and minimum grades). Last but not least, a student acts on a forum, other students or a teacher react and an interaction chain is built up. Slowly, action, reaction, interactions, are building up the community of learners.

Throughout the training period, each individual learner is progressively included in a learning community. Beside, The head of the teachers acts as a community manager, giving rhythm and harmonizing the learning community. He/she is the keeper of the pace and peace of the forum, he directs the exchanges, orientating them on important topics related to the courses. He / she decides when the last hands-in can be sent back to teachers for correction and what is the ideal time for each correction. The students group lives like an organism, with its own rhythm of learning (which is the essential function of having such a group).

Each and everyone is included within this whole organism, individualities are melted in a collective dynamic that aims at a single direction. Students' individual goals may be somehow different, but learning is common to all and they get united in this common path. They follow a common method, that is to say they follow the same path to knowledge ; guided by a few pedagogues that lead the group on this one-track way. The website provides all the material necessary to step on and go forward and the LMS manager oversees the whole operation.

When listening to students after their training period, I found out that they the collective dimension of their learning process had been extremely important for them. It is thanks to the group that they had kept studying all along their training period (that could last eight months, sometimes even more) : they had been boosted by a collective dynamic which had enhanced their individual performance, through both competition and cooperation. On the one hand, they had competed to get the best grades of the group, on the other hand they had cooperated and helped each other to solve problems. This "coopetition", as it is frequently referred to at Cnam, is a group dynamic since both cooperation and competition tie up the group and lead all members to the same destination of knowledge.

Students feel supported on their long-lasting effort : some of them said they hadn't given up in a moment of weakness because they had felt part of a learning team. Competition seems to help the best students, they compete to be even better and to surpass the others. Cooperation could also be an advantage for weaker students : they are supported in difficult moments and can catch up with the group thanks to their help. A few online teachers have set up complex "coopetition" : groups of students cooperate to compete with other groups. There is solidarity within the group, acceptable ferocity against other groups. And the result of the whole organization is a forward movement, to keep learning more and more on the LMS.

An example of this complex "coopetition" has been provided by a groupwork (4-6 students) on a specific topic during part of the training. After a presentation of each group's subject, they have worked in small teams cooperating together and competing against the other teams to get the

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best collective assessment. This can be done on the LMS, thanks to virtual classrooms (see my other presentation here in Sevilla) or, on a basic version of it, thanks to forum dynamics.

Discussion

Therefore it appears that a workgroup can be established on the basis of the interactions between its members : the more learners, teachers and artifacts interact, the more effective and efficient the learning group becomes.

The workgroup is effective since more results are produced throughout interactions : a student alone, without any course material to interact with (and behind the course, the teacher who wrote it), won't learn much on his/her own. If he/she has a course material available on a virtual campus such as a LMS, he/she is more likely to meet his learning objectives. A connection with other students and teachers on a LMS makes it even more effective : he/she will understand better thanks to questions asked to the teachers and answers provided, he/she will find motivation to go further, competing with the best, cooperating with his/her learning team. He/she will benefit more for the learning process , the learning group will be more effective thanks to interactions.

The workgroup is also more efficient since interactions allow to reach the same number of learning gains in a shorter period of time and a less money. A workgroup interacting properly speeds up its learning rhythm and most students in the group get to know quicker what each of them would have learnt in a longer span of time if let alone. Learning is therefore more efficient when the group of students interact properly on the LMS : each student learns quicker.

What's more, a single teacher can moderate twenty students, or more, in their discussion on the forum – if each student abides by the online conversation rules. Costs are therefore cut and group learning is more efficient since it is less expensive than individual courses. Interactions with the teachers are also recorded on the forum, and any student who has missed a week's lesson can catch up with the group without any supplementary cost. Money saving is therefore both due to interactions among students and interactions with the LMS website.

A final dimension could be explored : the question of efficacy. When effectiveness was linked to production of learning results, efficiency linked to production of quick and non expensive learning results, one can define efficacy as an extra production of homogeneity among students' results. The objective of training managers is indeed that most students will reach the knowledge objectives defined in the learning contract they sign when they buy and enroll the training. It is important that groupwork should produce effectiveness and efficiency, but efficacy is also fundamental. Since students interacts with each others, their respective level of learning tends to be closer. One gets to know what the other knows thanks to their interactions. Interactions of the group with course material and teachers correct the gap between the weakest students (who are helped) and the best students (who are fostered to help the weak and pull the group forward).

Therefore, an homogenous group of students is built up and dispersion around average level is reduced. A normal group³ with a strong interaction rate is better since most students reach the learning objectives of the training– effectiveness and efficiency are thereby completed with efficacy.

³ The adjective normal refers to a statistical approach of the distribution of student's grades, following a Gauss curve.