The origins of problem based learning education essay

In the other hand, PBL could be learned in a distance mode. Its characteristics go very well with those of an elearning mode. This paper focuses on the anatomy of tutorial groups and participants' roles. It presents the key steps in the PBL discussion process and the seven jump method. In addition it gives the equivalent schema of an ePBL learned using the Moodle LMS.

introduction

The origins of Problem-Based Learning (PBL)In 1920, Celestin Freinet, a primary school teacher, returned from World War 1 to rural south-eastern France. His injuries left him to short of breath to speak to a class more than few minutes so he created a system in which his pupils were encouraged to take control of their own learning. He encouraged them to be creative, express themselves clearly, take responsibility for their own learning, learn to be cooperative rather than competitive, evaluate their own progress, in short to be prepared for life-long learning (Clandfield & Sivell, 1990). These are the key ingredients of PBL, a method of promoting active learning by giving students an opportunity to explore issues, identify learning tasks and evaluate their ongoing progress. The more recent origins of PBL and the use of the term can be traced to North America in the 1960s. A number of medicals schools introduced some problem-based, self-directed, student activities (Harris, Horrigan & Ginther, 1962). But the credit for the introduction of the first PBL curriculum belongs to the McMaster Medical School in Hamilton, Ontario, which was started in 1969 after three years of planning (Neufeld & Barrows, 1974). The first European PBL curriculum was introduced in the University of Maastricht medical school in 1974. This

course lasts six years and comprises four years of pre-clinical PBL course and two years of conventional clinical clerkships.

TUTORIAL GROUPS

A PBL tutorial group consists of a group chairperson, a scribe, other students and a tutor. A good group size is eight to 10 students. The role of the chairperson and scribe should be rotated through the whole tutorial group. Students should stay within a single tutorial group for a block, module or semester, around seven to 14 weeks. A tutorial group may spend one to one and a half hours on a new problem plus one to one and a half hours discussing a previous problem. The role of the chairperson is to investigate who the group members are and to introduce them. He has to make agreements with group members about the procedure of the discussion and then introduce the problem for discussion. The scribe has the important role of note-taking. Tutoring in PBL is quite different from lecturing. Effective tutoring involves knowledge, guidance and requires intense concentration. Discussion leading is an art form. But like all arts, we have to be shown how to do it, and we get better with practice. The strength ob PBL is that it can be vigorous and more engaging than a lecture because students are involved trying to put ideas into their own words. So above all, PBL needs structure and key points. The first key point is advance preparation and giving out the case one or more weeks ahead of time. Then the tutor chooses a case with controversy, " a case is a story with an educational message" and what makes it a good story is controversy. He has to set the scene for the case to warm up the audience before blurting out the first question. He must use a good opening question, involve as many people as possible, and ask NON-

threatening questions, control the discussion, correct student error and structure the discussion.

the seven jump method

For the first meeting there are five steps. At the beginning we have (1) to clarify terms and concepts not readily comprehensible then (2) to define the problem (3) analyse the problem and offer tentative explanations (4) draw up an inventory of explanations (5) formulate learning objective. Between meetings the students must (6) collect further information through private study. For the second meeting (7) they have to synthesize new information, evaluate and test it against the original problem, reflect on and consolidate learning (Abubakar, 1991).

pitfalls and advantages of PBL

The main lethal pitfalls that must be avoided at all cost are: not understanding how PBL works, poor planning and not doing enough work. Most students enjoy active participation and consider the process to be relevant, stimulating and fun (Des Marchais, 1993). The learning environment created by PBL is more convivial for students (Blight, 1995). PBL fosters self-directed learning skills (Norman and Schmidt, 1992) and promotes deeper rather than superficial learning. INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) AND eLEARNING : eLearning aim is to take advantage of technologies for online education and distance learning. Technological tools are presented in all areas and can increase the effectiveness in teaching. The information technology and communication are applied to education, training and learning in general, using in one hand

the Internet and on the other hand the multimedia aspects. Internet facilitates the diffusion of online teaching, interactivity and multimedia. It requires taking into account the sound, the image and the text content. The characteristics of distance education can be summarized as follows: The physical separation between teacher and learner. The contact and interaction between them is via audiovisual or text within an online system. The extensive use of technical means in access centers or private homes in order to overcome the constraints of time and place. The learner is an independent and flexible center of information. Traditionally it is the teacher who determines the rhythm of learning and decides the quantity of material to be learned. In distance learning, it is the learner's ability to manage the rhythm and quantity of his learning and depending success. The tutoring session is supervised by a tutor (or facilitator), who is usually different from the teacher who prepares the content. In a hybrid distance learning (alternating between proximity and distance) face to face sessions can be organized to complement the online lessons. Communication between students and teachers or tutors is in asynchronous mode. This mode adapts better to user's availability. Follow up with the tutor will be through indirect way such as email or chat. ePBL: Teaching the PBL goes very well with the distance mode. Many authors tried to incorporate PBL in distance education as for example (B. Price, 2000) and (P. Sancho and al., 2011). We propose in this paper to design the direct application of " the seven-jump method" in a distance learning environment. Teaching ePBL involves the use of a distance learning environment called platform, a software system called Learning Management System (LMS), developed for web support learners in their

educational path. The services usually include access control, communication tools (synchronous and / or asynchronous) (TechnoCompétences, 2003) and user groups administration. MOODLE: There are a variety of LMS, free and paid offering different services (D. A. K. Dogbe-Semanou and al. 2007). In our design we will use the Moodle LMS (P. Jermann and al. 2005). Our choice is based on several features including: It is an open source LMS available for installation. Its modular architecture and its simple and friendly interface. Its varieties of integrated and proposed tools. Active community of users and developers who continuously improve its functionalities.

TUTORIAL GROUP IN MOODLE:

Moodle allows direct creation of multiple groups. A group may consist of the tutor and a number of students. Students may remain enrolled in the same group as long as necessary for teaching the course. Within this group the students can communicate with each other or with their tutors through a variety of synchronous tools (chat for example) and asynchronous ones (e-mail and discussion forum for example). As needed, groups can be visible or not. If they are not visible, they cannot see other groups work and discussions. The advantage of the PBL teaching online is that students are constantly connected to the Internet and can use web services to complete their apprenticeship. Thus, they can have access to many existing publications and information on the web. Furthermore the platform allows the creation of multiple user profiles, namely: The Teacher editor profile - able to formulate the contents of the case study and post all resources on the online course space. The Teacher non editor profile - able to tutoring

students by correcting their activities mainly in putting comments, giving them notes, participating with them in discussion forums, etc. The Student profile - has the opportunity to participate in activities posted by the teacher.

the seven jump method

Using this online environment, the steps and meetings change of principle and mode so before each meeting, resources can be made available to student groups on the LMS. Students should study those resources before the meeting. Furthermore meetings can be face mode; in which case we would be using the hybrid mode, or by online meetings on the same space of distance courses. In both cases, the meeting would be organized differently. It would be a kind of constructive discussion on the entire contents of the resources already studied by students. Tutor would be the discussion leader, he should ask real situations related content to encourage students to find answers by themselves. We present the types of tools that can be used for each of the seven steps of the method as follows:

to clarify terms and concepts not readily comprehensible and

to define the problem:

File type text, file type video and audio can be posted. The Glossary tool could also be used to gather all the cases studied vocabulary with definitions. Students could participate in the enrichment of the glossary by posting their own definitions. In this case the activity could be evaluated by tutors.

Analyse the problem and offer tentative explanations

The teacher could open a discussion forum by specifying a subject that students discuss with their tutors. Also a chat window could be scheduled during a time slot in which students can exchange their opinions and requests further explanation of their tutors.

draw up an inventory of explanations and formulate learning objective

The Wiki tool available on the platform can be used by groups to make an inventory of all the explanations. This tool is used in collaborative work since each student in turn can add and edit the text he wants.

collect further information through private study

Since students are online, they have access to the Internet to supplement their information and compare the case study with others existing on the web. The tutor could focus their research in putting to them specific links or known databases.

they have to synthesize new information, evaluate and test it against the original problem, reflect on and consolidate learning

To synthesize and consolidate their learning, the tutor may ask students to prepare a slide presentation to post on space deposit if this reflection must be individual. If the work should be done in groups, students can use a discussion forum to do their synthesis then write it on a wiki. SOME ADVANTAGES OF ePBL: This mode of teaching the PBL has several advantages including: Giving more autonomy to the student for the

preparation of its activities. Extending the time interval of the student's work on the case study. Also, make communication between students and between students and their tutor continue, as space is available during the time. Change the principle of conduct of meetings by increasing student participation and transforming the role of tutor facilitator and moderator of the discussion. Take advantage of technology tools and multimedia and the Internet partly to better clarify the case study and have a greater possibility of comparison.