Studying Project Management Using Blended Learning Approach

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Abstract: - The paper presents the structure, course content and benefits of teaching project management using distance learning, resp. blended learning approaches. The course was designed as a part of a curriculum at the High School of Administration and Management, Maribor, Slovenia, enabling the students to learn the concept, development, implementation and control of different projects. Case studies related to real life situations and participation of the students in forums and other communication channels present an important part of this paper. As the course was designed above all for the part time students whose regular daily tasks in their jobs do not always allow them to take part at lectures, practical work or other forms of the teaching process, we concentrate on blended learning as a combination of conventional and flexible home study supported by modern information and computer technology. Here, very important is that the learning process and environment of the students is not constrained to enlargement of their knowledge; students' personal and social growth should be equally addressed.

Key-Words: - E-Learning, Distance Learning, Blended Learning, Project Management, Course Structure, E-Portals, E-Forums

1 Introduction

The fast paced professional world we live in today is dynamic and ever-changing, and many of us have become used to getting what we want when we want it, and without compromising on quality or price. That's fine for the most part, but when there are a number of variables or people involved in a learning process, it's not always so easy for things to turn out the way you want them. For the educational organisation who manages to get it right however, the rewards can be high.

The Project management course has been designed at the High School of Administration and Management Maribor to teach the students the skills of successful project management. The course is based on a so-called blended learning approach as a combination of conventional and distance learning techniques.

The first part of a paper presents shortly the characteristics of both conventional and e-learning techniques focusing on advantages of a combination of both study principles to support an effective execution of our Project management course.

In the second part of the paper, e-learning portal, its functions and possibilities that support distance learning related to project management course, is presented.

2 The Role of Project Management in Today's World and Education

Project management is gaining importance in today's business and professional world. A study made in USA by Luftman in 2004 [1] showed that more than half of projects in information services do not reach their goals or have seriously overdrawn their time limits. Therefore is the study of project management one of the most requested studies of non-technical disciplines among professional population.

Best method for preparing students for appliance of project management skills and techniques is to use real life situations already during the teaching process.

Most of the students at the High School of Administration and Management Maribor are adult persons with some professional experiences. It is very important for their personal and occupational development that they embrace the understanding and skills of project management at the same time as they gain their new special knowledge in the chosen speciality.

3 The Content of a Project Management Course

The content of a project management course taught at the High School of Administration and Management Maribor covers the main aspects of project management [2]:

- **Project definition**, covering the role of sponsors, stakeholders, project team, main mission and goal of the project, as well as the main resources, limitations and project risks.
- **Project planning,** describing different techniques, tools and common methodologies, but putting as much emphasis on common sense as possible.
- We also focus on the decision for a **project organisation** that can best suit a specific project.
- Describing the **role of the project manager** from both most important viewpoints (hard skills and soft skills), as we believe that success of the project mostly depends on the cooperation and positive atmosphere between al stakeholders of the project.
- As the work is only begun with a good plan, it is very important to precisely **realise** and carefully **monitor** the project execution with all the needed attention put on the **project changes.**
- Needed attention is set to teach the students how to prepare and lead effective **meetings** and how to use properly the **communication channels** between project team, project stakeholders and customers.
- **Presentation of project results** to different audiences puts the whole project definition, planning and execution in a proper light and teaches the students to present them and their work.
- The **project closure** is one of the most important steps in the project and has many aspects that have to be explained and comprehended by students.

When teaching these topics we want to use as much real life situations as possible to explain the most important messages of the thought content. It is normal to use seminars, group work and case studies for these purposes in conventional teaching methods.

4 Weaknesses of the Conventional Study System in the Case of a Project Management Course

In our project management program with many (100+) adult students who are regularly employed, this seriously limits the possibility of preparing quality lectures and lecturing materials. However, the searching of free time slots for working groups and tutors for practical work almost seeks a wizard. It is mostly limited to late afternoon hours and weekends. This time slots are then hard to link together into a continuous learning process, involving all of the students. Interactive field of teaching is represented in Figure 1 [3].

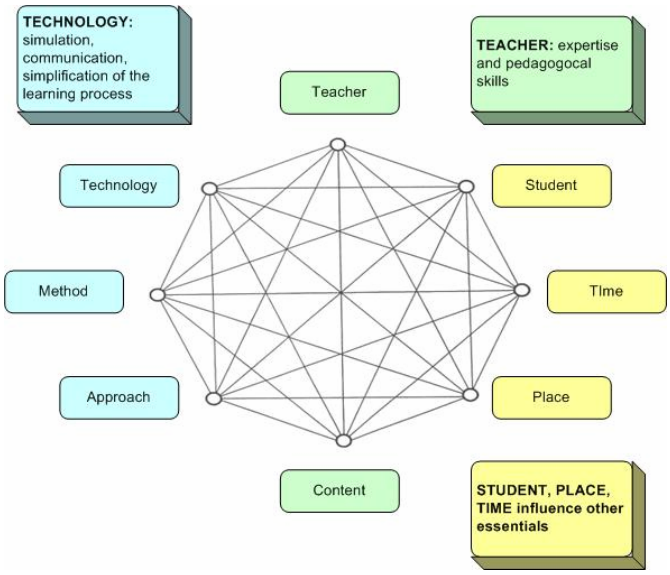

Fig. 1 Interactive field of teaching

On the other hand, internet and its services offer significant advantages that can be effectively used for non-conventional learning. We have at our disposal the contemporary technology, needed for the successful application of e-learning. Specific project management courses eventually require a blended learning approach as a combination of conventional and e-learning techniques.

5 Advantages and Opportunities of e-Learning Techniques

Using different e-learning methods, techniques, tools and environments, we can make the learning process much more effective and interesting for the students [4, 5, 6, 7, 8]. One of the major advantages is time- and place independency related to the execution of different tasks within the learning process. Above all, this is important when we deal with the part time students whose regular daily tasks in their jobs do not always allow them to take part at lectures, practical work or other forms of the teaching process.

Normally, they can afford (and they are willing) to study in evening hours and during the weekends. Since as a rule they can not get any direct help from the professors in that time, it is very important that they have at disposal all the needed e-materials needed for a successful and effective study. This first of all requires a suitable e-learning portal that includes e-books and other kind of e-presentation materials and bi-communication channels for keeping the contact with professors and other teaching staff, as well as with other students.

Using these means, the students can choose the most suitable time for their individual work. Furthermore, they can profit from communicating with educational personnel and their colleagues.

However, in spite of many advantages of computers and communication technology, we do not want to neglect the need of a direct contact between the teacher and students; moreover, we understand it as a necessary and important part of a whole education process.

Therefore, we decided to build a study course based on a combination of a conventional, face-to-face and e-learning process, or a form of a well established blended learning process underlining the advantages of both educational principles. The students can therefore profit from both direct contact with pedagogical staff and their own working group, as well as from flexible home study. Furthermore, a personal tutor is available to help the students all the time through the course.

5.1 Blended Learning Approach

Blended learning is usually described as a combination of traditional forms of teaching and learning in seminars where teachers and students come together face-to-face on the one hand and e-learning elements in the form of web based training on the other hand.

This approach is used to cover the integration of different forms of teaching and learning regardless of the issue of technology support. It is important to emphasize the multidisciplinary combination for the project management's skills and techniques with soft leadership skills such as social behaviours and teamwork.

To meet the content of the course and to achieve the needs of the student groups we used three various approaches according to the above mentioned teaching model. These three rudiments just differ in the amount of usage of web based training (WBT):

- The self paced web based part of the lesson uses the explorative and inductive didactic approach.
- The interactive web based part seeks the deductive-heuristic approach in synthesizing new solutions.
- The classical interactive part establishes the inductive part of the lesson where students get the fundamentals for their own understanding and the linking to real life situations.

These approaches combined with instructional system design are used within the course, Figure 2.

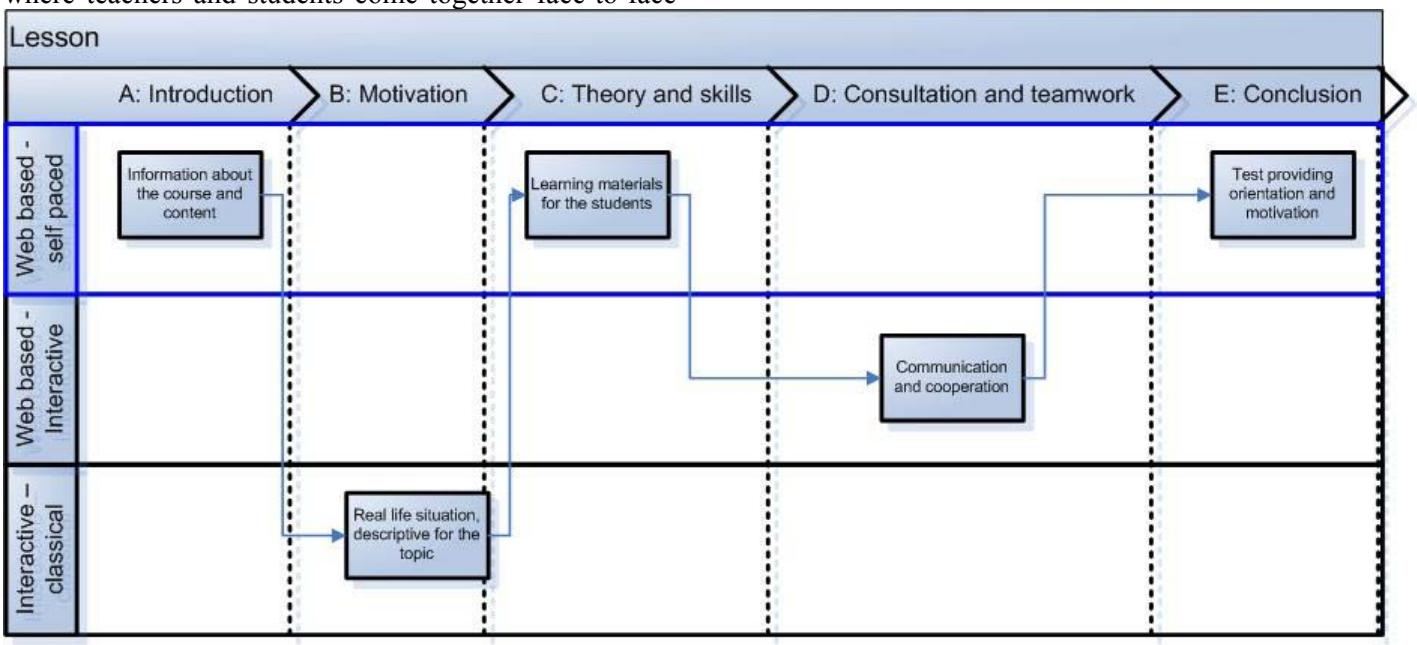

Fig. 2 Typical lesson structure using the blended learning approach

According to didactic and pedagogic aspects and to meet the objectives of teaching paradigms an **explorative approach** asks for case studies, guided texts or related links helping the student to increase his knowledge. An **inductive approach** claims for analytical framework which enables the learners to find fundamental regularities that enables them to find their own solutions to similar tasks. A **deductive-heuristic approach** is based on the same analytical content. The student is now able by means of a concrete case studies and real life situations to find an appropriate solution. Such a situation having a reference to practice offers the students an opportunity to find connections between theory and their every day's job and helps them to build cribs and memory hooks. These approaches are put into practice in the Project management course.

We combined explorative, inductive and deductive - heuristic approaches to put the required elements in each lesson. The teaching goals and contents:

- Information about the course and content,
- Real life situation, descriptive for the topic,
- Learning materials for the students,
- Communication and cooperation, and
- Test providing orientation and motivation,

are combined into five lesson phases:

- Introduction,
- Motivation,
- Theory and Skills,
- Teamwork and solution,
- Evaluation and conclusion.

Each phase seeks its own approach that proved to be the successful and effective from the students' viewpoint in the course run.

6 E-learning Portal Used for the Project Management Course

WebCT is a leading provider of e-learning systems for educational institutions. Thousands of colleges and universities in more than 70 countries worldwide are expanding the boundaries of teaching and learning with WebCT. WebCT's vision is to enable educational innovations everywhere by connecting people and technology [9].

A screenshot from the WebCT based learning portal used at the High School of Administration and Management in Maribor is represented in Figure 3.

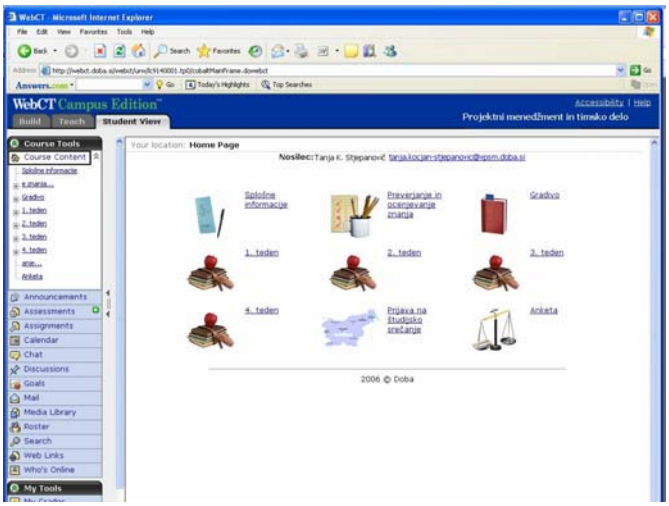

Fig. 3 WebCT based learning portal

WebCT e-packs have the following key features [9]:

- *Consistent navigation and organization:* Easy-to-use navigation with well-organized chapters to enable selective release and customization.
- *Practice exercises and self tests:* Opportunities for students to assess and strengthen their knowledge and skills on their own with immediate feedback provided.
- *Interactivity:* Case studies, simulations, games, problem-based activities, etc. that require input and actively engage students in the learning process.
- *Multimedia:* Video clips, audio clips, animations, etc. with instructional value.
- *Quizzes and assessments:* At least 1 but no more than 3 quizzes or assessment per chapter.
- *Question database with varied question types*: A question database with at least 500 questions of 3 or more question types (multiple choice, true/false, essay, etc.)
- *Instructor resources*: Additional information for instructors only, such as a teaching tips, project ideas, discussion questions, and suggestions for collaborative activities.

7 Example of a Lesson Structure

As an example, let us study the structure of the
Lesson 5: The project manager's role.

The five lesson phases are described as follows:

A. Introduction:
General description of the presented topics and it's placement in the whole course is presented in Figure 4.

This parts of the lesson the prerequisite for the attention to the class and has to be absolved before the next part. It is fully web based and self paced. Student can take time to think about the topics and possibly find other resources.

B. Motivation
Situations presented in this part of the lesson link the purpose of the lesson with student's experiences to open them for new theoretical knowledge and discussion of similar situations. The part is absolved within groups of students with mentors the classroom. Cases [10] are used to raise the awareness of the topics and to build the interest in the use of the theory to be learned.

INTRODUCTION:
A project has no real chance of a successful conclusion if it doesn't have a clearly appointed leader. What are the project manager's (leader's) tasks? *"Project manager's task is to fulfill the project goals according to accepted plan with planned resources and in foreseen time."* Thos answer is right, but very principled. It only shows a hint of the complexity of project manager's tasks. The manager must namely **impersonate the project** in all its forms and in every moment keep the idea of WHY we started the project, WHAT was the purpose (Quantitative and qualitative goals) and HOW do we intend to run the functional content of the project.

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PURPOSE OF THE LESSON:
In this lesson we will devote our attention to project manager's goals and tasks. We will emphasize the different leadership aspects that form the project manager's work space as he or she is a person that is representing the project (it's status and development) in the eyes of all stakeholders.
After studying this lesson the student will be able to:

- Describe project manager's tasks,
- Understand and use different communication techniques
- Differ between the expectation management presentation to stakeholders
- Know which skills are needed for a good project manager
- Understand which are needed characteristics for a good project manager

Fig. 4 Introduction to a lesson

It is our experience that group assesses the situation better and can find more similarities to individual resembling situations in a direct conversation with minimal mentor interventions.

This kind of situational study brings high motivation even to average students. Figure 5 shows two real life situations that serve as basics for discussion.

C. Theory and skills

Well motivated students complete this part immediately after the motivation part as they seek information on the proper situation solution. Material is prepared and presented as WBT in the learning portal.

D. Discussion

Moderated discussion is running under the learning portal environment to support the application of the gained knowledge in the next part. Students share their ideas and views as well as questions and discussion. The real life situations, presented in the phase B are discussed again. Students' activities vary form group to group. We have better group dynamics (approx. 30% more logins and 40% more collaborations) in younger groups (up to age 40) and the groups from western Slovenia.

REAL LIFE SITUATION 1:
General manager of your company has put an important assignment to you as a project manager: you have to prepare a solution to overview all the projects in the company. He explains, that the solution must answer to these questions:

- **How many projects are currently running in the company?**
- **Which projects are most important, when those are finished?**
- **Who is working on which project?**
- **How much time is spent on different projects?**

Now, you have the opportunity to ask the general manager as many questions as possible to understand your tasks. What do you ask?

REAL LIFE SITUATION 2:
You want to present the risks that are evaluated for your project to the management board of your company. They are all described in the Risk assessment document. So you start: "I'm sure that you've carefully read pages 37 to 53 of the project documentation where I have detailed the assumtions we've made in the planning and the risks the project faces. These are the challenges that we all must face together to resolve."

What can you expect from the managing board to answer? Why?

Fig. 5 Real life situations for discussion

E. Test

Purpose of the testing part is to verify the gained knowledge and to test it in the simulated situations. Therefore, two types of tests have been prepared:

- Self tests with predefined answers for the skills and theory part.
- Situation simulations that have to be evaluated and solved by the student and are then discussed with mentors.

8. Conclusions

In general the blended learning approach proves to be more effective as the conventional approach in the case of the project management course, where factual knowledge has to be combined with social oriented soft skills.

We made permanent evaluation during the course and the following analyses could be made:

1. The students appreciate having discussions and choices regarding the problems they are supposed to resolve. In particular, they like the "real life"

problems and they invest more efforts into tasks that concern them personally.
2. Most students like to work in small teams since they can complement one another. They mention that they need some time in the beginning to come to terms and share responsibilities but that working in teams, in general, is more rewarding than working on their owns.
3. The students are willing to make contributions on a voluntary basis throughout the term in the case that they know that this will potentially substitute a formal test or exam.
4. The students catch up attitudes on the fly. They appear more responsible, cooperative, and even constructive in the case that they perceive being trusted and respected.
5. The students find it difficult to evaluate themselves.
6. Most students are aware of a more diffuse style of learning in group projects. Most of them appreciate this unique opportunity of social learning and acknowledge that it has a different quality to conventional learning, most probably a quality that will be more useful in their careers than fact learning.
7. Some students would have preferred to acquire more consolidated knowledge they could apply as a resource in future projects.

The learning process and environment of the Project management's students should not be constrained to enlarge the students' supply of knowledge structures, but should equally address personal and social growth. Therefore, it requires the knowledge provider not only to follow the curriculum's requirements, but also to strive for understanding the students' meanings and feelings and to provide a transparent, open, and respectful learning climate in which students can work on real problems they wish to resolve personally. This can be achieved by the blended learning approach.

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