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Innovative Use Of Multimedia In Project Based Learning

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ABSTRACT

The educational technology movement has broadened the responsibility of education in the present scenario. The main concern now is the designing and the use of technology which is totally controlling the learning process. Educational technology facilitates learning and makes it realistic through systematic planning, development, organization and utilization of a full range of multimedia. Further it helps in a systematic way of designing, carrying out, and evaluating the total process of teaching and learning. Project-based learning or PBL is the use of in-depth and rigorous classroom projects to facilitate learning and assess student's competence. PBL focuses on student-centered inquiry and group learning with the teacher acting as a facilitator. PBL is a different teaching technique that promotes and practices new learning habits. By incorporating multimedia in PBL student teachers can become more creative and better teachers to face the real challenges that they have to encounter in the regular classroom teaching. Project-based learning (PBL) provides complex tasks based on challenging questions or problems that involve the students' problem solving, decision making, investigative skills, and reflection that include teacher facilitation, but not direction. Project Based Learning is focused on questions that drive students to encounter the central concepts and principles of a subject hands-on.

KEY WORDS : Teaching and Learning, Educational Technology, Project Based Learning, Concepts and Principles, Critical Thinking.

INTRODUCTION

The educational technology movement has broadened the responsibility of education in the present scenario. The main concern now is the designing and the use of technology which is totally controlling the learning process. Educational technology facilitates learning and makes it realistic through systematic planning, development, organization and utilization of a full range of multimedia. Further it helps in a systematic way of designing, carrying out, and evaluating the total process of teaching and learning. Many of the student teachers are found to be lacking in creativity, communications skills, analytical and critical thinking, and problem-solving skills. As such, there is much need for institutions of higher education to focus on training future B.Ed graduates to be more adaptable to the needs of the present scenario.

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Project-based learning (PBL) is an approach for classroom activity that emphasizes learning activities that are long-term, interdisciplinary and student-centered. This approach is generally less structured than traditional, teacher-led classroom activities; in a project-based class, students often must organize their own work and manage their own time. Within the project based learning framework students collaborate, working together to make sense of what is going on. Project-based instruction differs from inquiry-based activity by its emphasis on collaborative learning. Additionally, project-based instruction differs from traditional inquiry by its emphasis on students' own construction to represent what is being learned.

BACKGROUND: PROJECT BASED LEARNING:

- **Is organized around an open-ended Question or Challenge:** This focus students to work and deepen their learning by centering on significant issues, debates, questions and problems.
- **Creates a need to know essential content and skills:** Typical projects begin by presenting students with knowledge and concepts and then, once learned, give them the opportunity to apply them. PBL begins with the vision of an end product or presentation which requires learning specific knowledge and concepts, thus creating a context and reason to learn and understand the information and concepts.
- **Requires inquiry to learn and create something new:** Not all learning has to be based on inquiry. And this inquiry should lead students to construct something new – an idea, an interpretation, a new way of displaying what they have learned.
- **Requires critical thinking, problem solving, collaboration, and various forms of communication:** Students need to do much more than remember information—they need to use higher-order thinking skills. They also have to learn to work as a team and contribute to a group effort. They must listen to others and make their own ideas clear when speaking, be able to read a variety of material, write or otherwise express themselves in various modes, and make effective presentations.
- **Allows a student to work independently:** Students learn to work independently and take responsibility when they are asked to make choices. The opportunity to make choices, and to express their learning in their own views.

Project-based learning or PBL is the use of in-depth and rigorous classroom projects to facilitate learning and assess student's competence. PBL focuses on student-centered inquiry and group learning with the teacher acting as a facilitator. PBL is a different teaching technique that promotes and practices new learning habits. The students have to think in original ways to come up with the solutions to these real world problems. It helps with their creative thinking skills by showing that there are many ways to solve a problem. Multimedia can be defined generally as a combination of two or more media such as sound, images, text, animation, and video. For educational technology purposes, multimedia refers to computer-based systems that use associative linkages to allow users to navigate and retrieve information stored in the form of text, sounds, graphics, video, and other media. Multimedia can be used while giving instruction in a variety of creative and stimulating ways..

Multimedia is changing the communication style with each other. The inclusion of media elements reinforces the message and the delivery, which leads to a better learning rate. The power of multimedia lies in the fact that it is multi-sensory, stimulating the many senses of the students. It is also interactive, enabling the end-users of the application to control the content and flow of information. This has introduced important changes in our educational system and has its impact on the way we communicate information to the learners. The evolution of multimedia has made it very possible for learners to become involved in their work. Thus Multimedia in teaching refers to as use of more than one media to make the teaching effective. By incorporating multimedia in PBL student teachers can become more creative and better teachers to face the real challenges that they have to encounter in the regular classroom teaching.

Currently, many teacher education institutions are moving towards Project-based learning as a solution to producing student teachers who are creative and can think critically, analytically, and solve problems. Since knowledge is no longer an end but a means to creating better and effective teachers and encourages lifelong learning, project-based learning is becoming increasingly popular in teacher education institutions as a tool to address the inadequacies of traditional teaching. Since these traditional approaches “do not encourage students to question what they have learnt or to associate with previously acquired knowledge” project-based learning is seen as an innovative measure to encourage students to “learn how to learn” or “learning by doing”

MATERIALS AND METHODS:

Action Research was conducted to see the innovative use of Multimedia in project based learning (PBL). “To study the innovative use of Multimedia in project based learning (PBL) among B.Ed students”

OBJECTIVES

- To use multimedia innovatively in PBL.
- To develop multimedia projects through PBL.
- To develop mastery in the content selected for PBL
- To become effective classroom teachers.
- To develop better communication ability.

Definitions of technical terms:

- **Multimedia:** Multi media in teaching refers to as use of more than one media to make the teaching effective.
- **PBL:** Project-based learning or PBL is the use of in-depth and rigorous classroom projects to facilitate learning and assess student's competence.

STUDY DESIGN:

Sample: A sample of 20 B.Ed students was selected from science and arts stream were selected of 10 each respectively.

Innovative use of Multimedia: the students were asked to select any content of their choice and were asked to develop multimedia projects to teach that particular content effectively.

Assessment criteria

At the end of the project the students submitted their final projects of the materials developed and CD for their presentations.

1. **Originality:** How original or creative was their ideas?
2. **Critical thinking:** how well they were able to analyse the content and think critically.
3. **Use of media:** How successful were they in the use of media elements to represent their ideas?
4. **Presentation:** How well was the material presented?
5. **Team work:** How did the team work together to produce the different medias

RESULTS AND DISCUSSION:

The students (N=20) were also given a questionnaire and were surveyed on their project individually. The survey consisted of questions to assess their interest in the project work and whether or not they were motivated in their project development. The survey also tried to know their level of understanding, critical thinking skills, and creative thinking as well as how they worked as a team. The questionnaire was measured using a 5-point scale.

INTERPRETATIONS

On the whole, the students innovatively used multimedia in PBL and were able to have a positive attitude towards this project based learning environment. Based on the results of questionnaire it was found that three areas were significant in shaping these students' attitudes towards the project. The first is that the project helped in the understanding of the content, and analyzes the content (95%). The second area was to use multimedia innovatively in the project (96%). The third area was that PBL helped to become effective teachers (96%).

As such, the use of multimedia in PBL is an innovative and effective teaching -learning strategy because they motivate the students in their learning process and help them to acquire good teaching skills. As evidenced by this project, students became very active participants in their learning process instead being passive learners, and were able to use various media elements to accomplish their project.

1. By using a multimedia in PBL, we can move towards the Constructivist learning mode, which is student-centric.
2. Teachers can successfully integrate multimedia PBL classroom, instilling the effect "learning how to learn" and lifelong learning attitudes in the students, and
3. The multimedia-oriented PBL curriculum serves as a strong framework for teaching and learning.
4. Encourages deep reflective thinking.
5. Create personally meaningful learning opportunities.
6. Appealing and manageable to students with special needs and at risk students.
7. Motivates students to actively participate in the total learning process.
8. Makes teaching and learning process realistic.

CONCLUSION

With Project-based learning students learn from experiences and take them into account and apply them to their lives in the real world. PBL is a different teaching technique that promotes and practices new learning habits. The students have to think in original ways to come up with the solutions to these real problems. It helps with their creative thinking skills by showing that there are many ways to solve a problem.

Thus by using multimedia in PBL, the teacher can adopt new instructional strategies to create a stimulating teaching and learning environment. The infusion of multimedia in PBL has paved way to educators to teach help students learn in a more realistic manner.

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