STUDENT'S PERSPECTIVE ON PROJECT BASED LEARNING


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ABSTRACT

Education is a critical component of character development for the nation's future generations, who must grow and adapt to changing circumstances. As a result, the education system used in higher education must be capable of developing students' skills and abilities. The purpose of this study is to investigate and analyze Project Based Learning as a method of instruction that can be used to track student progress. This is a qualitative study that employs an analytical descriptive method in the form of a literature review. The findings indicated that project-based learning not only enhances student learning but also has an effect on teacher efficacy.

Keywords: education, learning methods, university students, project based learning

INTRODUCTION

Education, as one of the foundations for personal development for the country’s next generation, must continue to be evolved and adapted to the times, particularly to fulfill technological developments; thus, the university education system should be capable of producing student abilities and skills [1]. Project-Based Learning (PBL) is a structured pedagogical approach that involves students in knowledge construction by inquiring them to complete meaningful projects [2], [3]. Project-based learning is one of the learning methods derived from a constructivist approach that leads to problem-solving activities [4]. This model focuses on the main concepts and principles of a discipline, involves students in problem-solving, offers students an opportunity to work independently in constructing their learning, and finally produces valuable and realistic’s student working products [5]. However, the main challenge to implementing Project-Based Learning curricula is that they require simultaneous changes in curriculum, teaching, and practice-change assessment that are often unfamiliar to university students and lecturers [6].

Furthermore, an additional analysis by Moore et al. [6] revealed that Project-Based Learning can assist students in making important considerations and overcoming alternatives with more than just opinions. It is believed that Project-Based Learning not only assists students in navigating all those options presented in an open context, but also in approaching these options mathematically. The benefits of Project-Based Learning are crucial for students since they could learn and use formal knowledge in an authentic and complex setting.

In accordance with the urgency that has been explained previously, the implementation of Project-Based Learning in the teaching and learning process is highly important to improve
student academic achievement. When university students are introduced to a Project-Based Learning model, it is expected that they will be better in preparing to enter the workplace. Therefore, this study will further analyze the student's perspective on project based learning.

METHOD

This is an exploratory qualitative study. This research method employs analytical descriptive analysis, which is a technique for obtaining detailed data, data that contains meaning and has a significant impact on the research's content [10]. This research is a subset of what is referred to as a literature review. A literature review is a methodical, explicit, and reproducible procedure for identifying, evaluating, and interpreting previously published documents [11]. This study examined five peer-reviewed manuscripts on Project-Based Learning that were published between 2020 and 2021. Additionally, the articles in these journals were analyzed descriptively in order to obtain a coherent and systematic understanding.

Project-Based Learning

By facilitating, investigating, and solving problems, as well as other meaningful tasks that are student-centered and can result in tangible products, project-based learning (PBL) is a fundamental concept and principle of a discipline [7]. According to Sundahry [8], anyone who learns must be active on their own, and learning is impossible without activity. Students can participate in a variety of activities at school and university. Fitria also discussed the importance of changing the habits of teachers who rely solely on experience and view their lack of familiarity with learning models as an excuse to address in the future [9]. As a result, PBL is a viable method to incorporate into the current learning model. According to the explanation above, the PBL strategy is an approach that centers students on the learning process and prepares them for real life by exposing them to real-world problems. Marza et al. assert that this educational approach will be based on creativity, planning, and fiction. PBL activities will focus on the process of remembering, comprehending, applying, analyzing, evaluating, and creating [9].

Media as Learning

Along with learning models, educational tools, specifically learning media, are required to aid in increasing educational output. Media are either learning resources or actual teaching aids that incorporate instructional materials into the classroom environment and are capable of motivating students to learn. The term "learning media" refers to any medium that conveys messages or information with an educational purpose or that contains the truth about what learning [9]. The learning process will be successful only if the appropriate media is used to create engaging learning activities. It would be preferable if the students created and produced the media. These media may be tailored to the students' characteristics and thought processes. Students can create a mind map as one of their media. Mind mapping assists teachers in directing students' attention to specific aspects of the subject being discussed during the learning process. Teachers can determine whether students
comprehend the subject and how to manage and construct the appropriate structure for the subject using the mind maps created by students. Thus, mind mapping is an effective tool for students to use in developing a work map for developing knowledge that can aid in the learning process [9].

RESULT AND DISCUSSION

A. RESULT

First, a research entitled A review of project-based learning in higher education: Student outcomes and measures in the International Journal of Educational Research. [2] Project-Based Learning(PjBL) is conceived as a favorable approach for improving student learning in higher education. Empirical studies on Project-Based Learning have been reviewed with a focus on student outcomes. Affective outcomes (i.e perceived benefits of PjBL and perceived experiences of PjBL) were most widely implemented, as measured by questionnaires, interviews, observations, and self-reflection journals. Cognitive outcomes (i.e knowledge and cognitive strategies) and behavioral outcomes (i.e skills and engagement) were measured by questionnaires, rubrics, tests, interviews, observations, self-reflection journals, artifacts, and log data. Artifact performance results were assessed with a rubric. According to the research conclusion, the upcoming study should investigate further about the student learning process and the final outcomes. Another point is that measuring instruments and data analysis should also be improved.

Second, a research conducted by Barak & Yuan under the title A cultural perspective to project-based learning and the cultivation of innovative thinking in the journal Thinking Skills and Creativity. [3] The findings show that studies on higher-order thinking skills suggest the importance of developing creative thinking through Project-Based Learning; however, there is little attention paid to the student's cultural background. Given the increased mobility of international students, the aim of this study was to examine the role of Project-BasedLearning in cultivating innovative thinking as perceived by international students from China and by local students. Participants took the same Project-Based Learning courses in different classrooms, with the same teaching staff. Data was collected using a mixed methods case study design, which included before and after questionnaires and focus group interviews. Although the Project-Based Learning process had a positive impact on students' perceived innovative thinking development in both groups, differences in the behaviors that lead to the generation of innovative ideas were discovered. The advantages of observing and questioning behavior were identified by Chinese students, whereas the advantages of the Idea Network were identified by local students. This research presents a five-step innovative PBL process that can be applied to higher education programs, emphasizing the importance of cultural sensitivity in course design and delivery for international students.

Third, research conducted by Martinez & Andujar [12] entitled Development of competences in postgraduate studies of finance: A project-based learning (PBL) case study in the journal International Review of Economics Education. The results show that the methodological paradigm developed in European higher education over the last few decades focuses on the concept of 'competence' to achieve student employability. This educational professionalization requires a more flexible and active teaching-learning context. This paper
presents empirical research into the application of Project-Based Learning (PBL) in postgraduate studies of finance at the University of Jaén (Spain). The researcher has three main objectives, all of which are related to the importance of students' perspectives in their own motivation and performance. First, to analyze students' perceptions of the effectiveness of this methodology by improving several key competencies for student employability. Second, to see if the perceived utility of these skills changed due to the Project-Based Learning experiment. Third, to find out what students think about the method's uses, benefits, and drawbacks. The findings of this study support Project-Based Learning's claimed ability to improve teamwork, communication, creativity, organization, and information management skills. In addition, the conclusion show that students are highly satisfied, emphasizing the benefits of Project-Based Learning over conventional learning methods as well as its efficiency in learning about financing sources and connecting with the business world.

Fourth, a study regarding Applying project-based learning and SCAMPER teaching strategies in engineering education to explore the influence of creativity on cognition, personal motivation, and personality traits was published in the journal Thinking Skills and Creativity [13]. The results indicate that, due to the target market's paradigm shift, the skills required for engineering jobs must be practiced through interdisciplinary experience and creative thinking. Therefore, modern engineering education should emphasize the development of students' innovative thinking and ability to solve engineering problems through the development of creativity courses that encourage creativity, critical thinking, and the transfer of student learning skills.

Fifth, a scientific article entitled “How does learner-centered education affect teacher self-efficacy? The case of project-based learning in Korea”, in the journal Teaching and Teacher Education [14]. In this article, it is known that the data collection method is carried out through the Project-Based Learning (PBL) intervention program. Furthermore, this study employs a quasi-experiment to assess how Project-Based Learning is associated with teacher self-efficacy. Generally, teacher self-efficacy is considered only as a determinant of learning practice, but we found that teacher self-efficacy can be positively affected by the increasing of Project-Based Learning implementation. The conclusion showed that among the teacher self-efficacy subscales, Project-Based Learning was positively related to student engagement and teaching. Analysis using student data shows that students' positive responses towards learning practices can mediate the relationship between Project-Based Learning and teacher self-efficacy.

**B. DISCUSSION**

Project-based learning is one of the methods of learning derived from a constructivist perspective that results in problem-solving efforts [4]. This is consistent with the research reviewed previously under the title A review of project-based learning in higher education: Student outcomes and measures [2], which concluded that Project-Based Learning is a promising approach for enhancing student learning in higher education, allowing for constructivist learning. Additionally, empirical studies on Project-Based Learning indicate that putting the emphasis on students and changing the habits of teachers who rely solely on experience and feel unable to use learning models as an excuse are forms of learning models that will continue to be used in the future [9]. Additionally, according to an additional analysis by Moore et al. In [6], project-based
learning can help students make critical considerations and alternative approaches using more than just their opinions. Not only does project-based learning assist students in navigating the numerous opportunities available in a context, but it also helps them gain a better understanding of probability in mathematics. This demonstrates that, in addition to learning models, educational output-enhancing tools are required. According to research presented by [3] in the magazine Thinking Skills and Creativity, entitled A Cultural Perspective for Project-Based Learning and Cultivating Innovative Thinking, studies of higher order thinking skills indicate the importance of developing innovative thinking patterns through project-based learning. However, little consideration is given to the students’ cultural backgrounds.

According to the explanation above, the researcher examines how learning media contributes to the PBL method by assisting students in navigating the numerous opportunities available in a context and also assisting them in gaining a better understanding of probability and creativity. Media are either learning resources or actual teaching aids that contain instructional materials in a classroom setting and can motivate students to learn. Learning media are those that convey educational messages or information or that convey the truth about the value of education [15].

Successful learning requires the use of the appropriate tools to design engaging learning activities. Students design and produce the media; the media can be adapted to the students' characteristics and mentality; one of the media that students can use is mind maps. This is consistent with the findings of a study published in the journal Thinking Skills and Creativity titled Applying project-based learning and SCAMPER teaching strategies in engineering education to investigate the influence of creativity on cognition, personal motivation, and personality traits [13]. The study's findings indicate that, as a result of the target market's paradigm shift, the skills required for employment in the industry are creative thinking. By developing students' innovative thinking and ability to solve technical problems through the use of mind maps, we can design creativity courses that foster creativity, critical thinking, and make the material easy to understand.

A PBL strategy that centers students on the learning process and prepares them for real-world situations by confronting them with real-world problems [16]. Effective PBL activities can boost teacher efficacy. This is consistent with the research cited previously titled "How does learner-centered education affect teacher self-efficacy?" The case of project-based learning in Korea", published in the journal Teaching and Teacher Education, demonstrated that increased use of PBL can also benefit teacher self-efficacy. Not only does Project-Based Learning assist students in navigating the numerous possibilities available in an open context, but it also benefits teachers. This is critical because one of the objectives of Project-Based Learning is to improve not only the quality of student learning but also teacher efficacy.

**CONCLUSION**

Project-based learning is a structured educational approach that encourages students' active participation in authentic real-world analysis and open-ended problems through teamwork and engages them in knowledge building through the completion of meaningful projects.
According to the aforementioned research, project-based learning can assist students in making critical considerations and pursuing alternative approaches with more than just opinions. Not only does project-based learning assist students in navigating the numerous opportunities available in a context, it also helps them gain a better understanding of probability in mathematics. Additionally, successful learning requires the appropriate tools for developing engaging learning activities. A Mind map is one type of media that can be tailored to the characteristics and mentality of students. Additionally, this study discovered that project-based learning not only enhances the quality of student learning, but also has an effect on teacher efficacy.

REFERENCES


