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## Beyond the Classroom: The Potential of Project-Based Learning and YouTube in Fostering Learning engagement and Creativity in Digital Learning.

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### Abstract

The background of this research is the low of student learning engagement and creativity. The purpose of this study is to analyze the potential of project-based learning and YouTube in enhancing learning engagement and creativity. The method used in this research is a semi-systematic literature review. The results of the study describe that project-based learning and the YouTube platform have the potential to increase learning engagement and creativity. Some potential aspects of project-based learning integrated with YouTube include relevant and interesting learning content, real project learning experiences, interactive and responsive platforms, flexibility and adaptability, online collaboration features, experimental activity opportunities, and constructive feedback. The findings of this research can be considered by educators when designing learning experiences aimed at improving student learning engagement and creativity. Further research recommendations include the need for experimental implementation of project-based learning integrated with YouTube and measuring the impact of treatment in increasing learning engagement and creativity.

## A. Introduction

Education has undergone significant transformation alongside technological advancements [1]. In the digital era, educators not only focus on delivering information to students but also need to enhance learning engagement [2] and student creativity [3]. This is crucial because digital learning often faces challenges related to declining student learning engagement and creativity.

Several studies describe the low student learning engagement, evident through low participation rates in online learning [4], poor quality of virtual interactions [5], and minimal student engagement in digital-based learning projects [6]. Furthermore, others research also describe a decline in student creativity in digital learning. This can be analyzed through indicators such as a lack of innovation in task completion, an inability to find alternative solutions, and limitations in designing creative projects [7], [8].

An effective learning design ideally addresses the low of learning engagement and creativity of students [9]. The process of designing effective learning involves analyzing the digital potential that aids in solving existing learning problems. For example, the chosen learning approach should be suitable, the media used should be up-to-date, and a combination of various learning elements that align with the student needs should be incorporated [10].

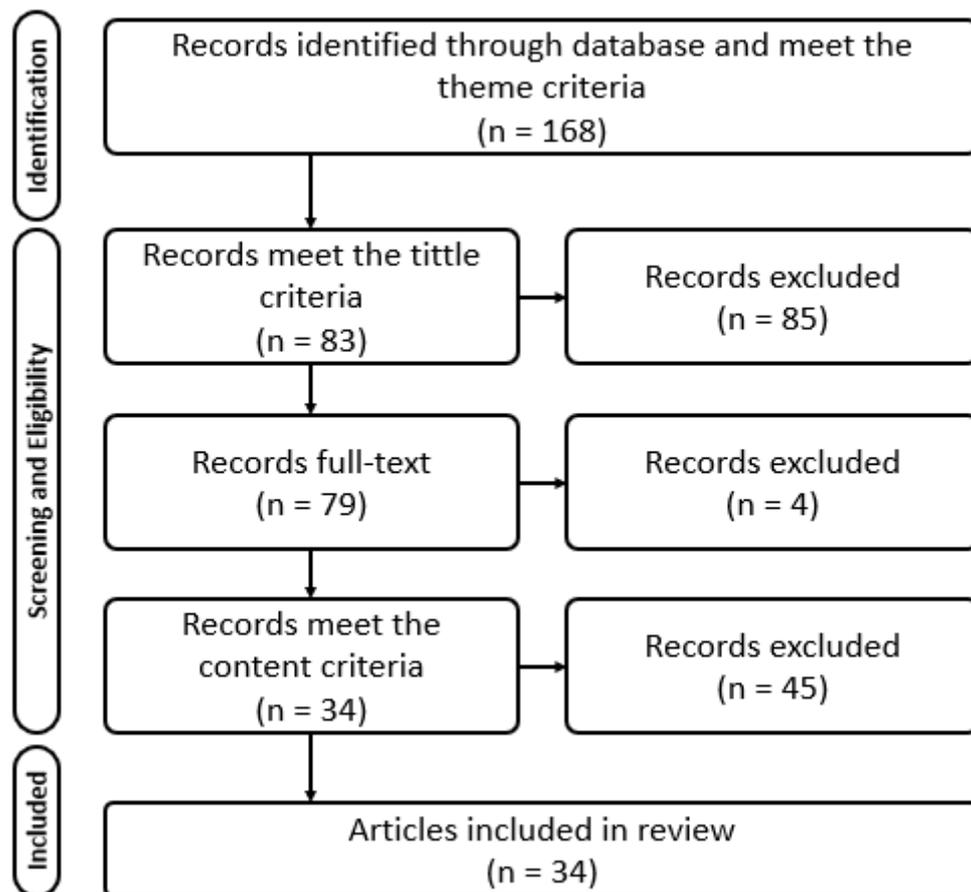
In this context, the Project-Based Learning (PBL) approach and the use of social media platforms, especially YouTube, have the potential to excel in enhancing student learning engagement and creativity [11]–[14]. This is based on several advantages of PBL, such as the concept of active involvement in every stage of the project, emphasizing collaboration, communication, and the development of critical and creative thinking skills [15]. On the other hand, YouTube also offers several supporting potentials, such as accessibility and flexibility as a learning medium, serving as a source of creative inspiration, providing a strong visual experience, and creating space to accommodate student creativity [16].

The strengths and potentials offered by PBL and YouTube need to be analyzed and explored more deeply. This is aimed at ensuring that the analysis results and research findings related to this topic can be considered technical considerations that facilitate the process of designing effective learning. The potentials and advantages of each variable can be ideally collaborated into a learning design that is effective in enhancing student learning engagement and creativity. This research aims to analyze in-depth the potential and advantages of PBL and YouTube in improving students learning engagement and creativity. The urgency of this research lies in the importance of research results that can stimulate the creation of effective learning designs as solutions to learning challenges in the digital era. The research targets include addressing several research questions, such as:

1. How does the potential of PBL contribute to enhancing student learning engagement and creativity in digital learning?
2. How does the potential of YouTube contribute to enhancing student learning engagement and creativity in digital learning?
3. What research gaps can be analyzed and used as recommendations for further research?

## B. Research Method

This study employs a semi-systematic literature review (SSLR) to address the research questions. SSLR aims to identify relevant research articles, select necessary data, analyze, and synthesize the results to gain a deeper and broader understanding of the researched topic [17]. The SSLR process begins by determining keywords to be used in searching for research results in the database [18]. Google Scholar is the database used as the source of research articles. The specified keywords are "the potential of PBL and YouTube in enhancing student engagement and creativity in digital learning." Research articles collected are then screened based on criteria such as theme, title, full-text article accessibility, and content. Articles that meet the criteria are identified and analyzed concerning the theme and patterns of information related to the research topic. The stages of SSLR implementation can be observed as follows:



**Figure1.** The technical stages of article selection

## C. Result and Discussion

### 1. Essential Elements in Enhancing Student Engagement in Learning

Effective digital learning requires several elements that can significantly enhance student learning engagement. One key element is relevant and interesting learning content [19]. Presenting material that aligns with student everyday lives and triggers their interests can boost intrinsic motivation, which, in turn, strengthens student engagement [20]. According to motivation theory, student

engagement is higher when they perceive value and relevance in what they are learning [21].

Furthermore, a project-based learning (PBL) approach has also proven effective in increasing student engagement. PBL involves students in real-world tasks or projects that challenge them, allowing them to apply their knowledge and skills in meaningful contexts [22]. According to constructivist theory, learning related to real experiences can motivate students to actively engage in the learning process [23].

Cognitive psychology indicates that social interaction and feedback have a positive impact on the learning process and student motivation [24]. In the context of digital learning, the use of interactive and responsive platforms also plays a crucial role. Facilities for interaction among students and direct feedback from teachers can create a dynamic learning environment that triggers a sense of engagement. Furthermore, flexibility and adaptive learning levels are another element that can enhance engagement [25]. Allowing students to learn at their own understanding and pace can increase a sense of control and learning satisfaction.

**Table 1.** The essential elements in enhancing student learning engagement

Element	Function
Relevant and engaging learning content	Spark interest in learning Increase intrinsic motivation
Real project experience	Increase student activeness in learning
Interactive and responsive platform	Creating a dynamic learning environment Spark a sense of engagement Allows learning according to the level of understanding and speed
Flexible and adaptive	Increased control over learning Increase learning satisfaction

## 2. Essential Important Elements in Increasing Student Creativity

Digital learning considered specific elements can significantly enhance students' creativity. One crucial element is providing creative challenges that stimulate out-of-the-box thinking and motivate students to seek innovative solutions [26]. According to the theory of creativity, presenting complex challenges can trigger divergent thinking processes, where students are confronted with various options and creative ideas [27]. Furthermore, online collaboration is also a vital element that can enhance students' creativity. Through online platforms, students can share ideas, provide feedback, and collaborate in creating something new [28]. Social constructivism theory suggests that social interaction can stimulate creative ideas through the exchange of information and perspectives [29].

Another important element includes media-based projects. Projects can be designed, such as creating videos or podcasts, playing a role in stimulating students' creativity [30]. Such projects allow students to apply their knowledge through engaging media, providing freedom of expression and fostering the development of creative skills [31]. Additionally, Flexibility in assessment is another element that can enhance students' creativity. Providing space for students to explore various creative approaches without limits can offer positive encouragement and create an environment that supports creative exploration [32].

Moreover, support for experimentation and creative learning design approaches is also a crucial element. Placing students as creators and innovators can create an environment where students feel free to try new things without fear of failure. This aligns with developmental psychology theories that indicate experimentation and the courage to try new things are key elements in developing creativity [33].

**Table 2.** An essential element in increasing student creativity

Elemen	Fungsi
Online collaboration	Share ideas Provide suggestions and feedback Working together to create something new
Media-based projects	Apply knowledge Provides freedom of expression Provide opportunities to explore creative approaches without limits
Flexibility in assessment	Creating an environment that supports creative exploration
Opportunities for experimental activities	Placing students as creators and innovators Give students the freedom to try new things

### 3. The Potential of Project Based Learning

Project-Based Learning (PBL) has a significantly positive impact on student learning engagement and creativity, as supported by findings from various studies. Firstly, PBL brings learning into real-world contexts by assigning tasks relevant to the actual world [34]. Students become more engaged as they can see a direct connection between the academic concepts they are learning and their application in the projects they undertake [35]. This creates strong intrinsic motivation as students perceive meaning and purpose in their learning.

In addition, PBL promotes active learning where students are actively involved in planning, implementing, and evaluating their projects [36]. This process triggers higher levels of engagement as students are not merely recipients of information but creators of knowledge. By directly participating in project development, students have the opportunity to apply the concepts they learn in practical contexts, resulting in a deeper learning experience [12].

Furthermore, PBL encourages collaboration and communication [37]. Through group work in project completion, students learn to communicate effectively, appreciate each team member's contributions, and develop crucial social skills [38]. This collaboration opens opportunity to the exchange of creative ideas, creating an environment that stimulates creativity growth through dialogue and interaction.

Finally, PBL provides continuous formative feedback and reflection [39]. This type of feedback guides students in improving their performance and offering additional insights for developing creative ideas. Students are also given greater freedom and responsibility in their learning, creating a sense of autonomy that can stimulate creativity. By combining learning engagement and creativity, PBL creates a dynamic and relevant learning experience for students, equipping them with deeper skills and understanding.

#### **4. Potential of Youtube**

YouTube, as a leading online video platform, offers significant potential in enhancing student learning engagement and creativity, as evidenced by research findings indicating its positive impact. Firstly, YouTube's ability to visualize learning materials through videos helps improve the understanding of concepts [40]. Student engagement can be enhanced with visual approaches such as visualization, animation, and demonstrations, significantly enriching the learning experience.

Secondly, YouTube offers high accessibility and flexibility [41]. Through various educational content accessible on this platform, students have the freedom to choose learning materials according to their preference [42]. This provides greater engagement as students can tailor the time and place of learning to their individual needs.

Furthermore, YouTube allows students to act as content creators [43]. The creative process of making videos to explain concepts or present creative ideas encourages direct student engagement in learning [44]. This creates opportunities for them to express their own creativity, stimulating creative and innovative thinking.

Lastly, YouTube facilitates collaboration and learning communities [41]. Creating channels and communities on this platform enables students to collaborate, share experiences, and provide feedback to each other [45]. This creates a more collaborative learning environment, supporting the exchange of ideas and strengthening creativity through community cooperation.

Overall, YouTube serves not only as a learning resource but also as a tool that can stimulate student engagement and creativity. By providing easy access, supporting content creation, and encouraging collaboration, YouTube becomes an effective tool in shaping a dynamic, relevant, and creative learning experience for students.

#### **5. Design Recommendations of Project-Based Learning Integrated with Youtube**

The integration of Project-Based Learning (PBL) with YouTube can be a powerful strategy to enhance student learning engagement and creativity. Here are some design recommendations to optimize the combination of these two elements:

a. YouTube as a Source of Project Learning Design Inspiration:

YouTube serves as a valuable source of inspiration in designing projects for Project-Based Learning (PBL) [46]. Teachers can leverage the diversity of content on YouTube, such as case studies, tutorials, and similar projects, to provide ideas and motivation to students. By watching uploaded creative projects, students can gain a deep understanding of various approaches and innovative solutions. Utilizing YouTube as a source of inspiration can stimulate students' creative thinking, open up space for exploring diverse ideas, and provide motivation through examples of others' success, all contributing to a project-focused learning experience.

b. Use of YouTube as a Project Presentation Platform:

In the context of project-based learning, YouTube can be utilized as a presentation platform for student projects [47]. They can create videos explaining concepts, showcasing project results, or even illustrating the project-making process. This allows students to actively engage in the development of multimedia content and hone visual communication skills.

c. YouTube as a Formative Evaluation Instrument for Project-Based Learning:

YouTube can serve as an effective formative evaluation instrument in the context of project-based learning [48]. Through accessible comment features and feedback, teachers can provide contextual and detailed evaluations of projects uploaded by students. Videos produced by students offer visual and narrative insights into the progress of their projects, enabling teachers to provide richer and more specific feedback. Meanwhile, students can use the comment feature to interact with feedback, fostering collaborative dialogue that supports continuous project improvement. Thus, YouTube not only acts as an evaluation tool but also facilitates continuous communication and reflection, enhancing the quality of projects and the learning experience within the Project-Based Learning framework.

d. Creation of Educational Project Content:

Creating educational project content on YouTube is an innovative approach in platform-based learning. In the context of YouTube-based learning, students not only consume information but also become producers of educational content [49]. This process involves students in designing, recording, and editing videos that explain learning concepts or showcase the projects they work on. By creating educational content on YouTube, students can express their creative ideas, sharpen presentation skills, and contribute to widely accessible learning resources. Besides providing students with an opportunity to actively participate in learning, this also creates an online learning community that can share knowledge and inspiration through the YouTube platform.

## **6. Recommendations for Further Research**

The researchers provide several recommendations for further research related to the integration of Project-Based Learning (PBL) with YouTube. First, further research should examine the extent of the contribution of integrated project-based learning with YouTube to the enhancement of student learning engagement and creativity. Second, additional research can focus on analyzing the social and collaborative impacts of this integration, considering how the use of YouTube as a platform influences collaboration and communication among students in the context of PBL. Third, exploration of the effects on learning motivation could be emphasized. Research examining whether the use of YouTube as a source of inspiration and project presentation can enhance students' intrinsic motivation towards learning.

Fourth, research can focus on the influence of this integration on students' mastery of multimedia skills, exploring its impact on practical development in video editing, graphic design, and presentation. Fifth, further research can involve the development of an optimal online mentoring model, examining effective ways

to guide and provide feedback to students during the content creation process on YouTube to enhance learning engagement and creativity. With a focused approach on these aspects, research can provide richer insights into the complexity and potential of integrating PBL with YouTube in enhancing student engagement and creativity.

#### D. Conclusions

The conclusion of this research is that integrated Project-Based Learning (PBL) with the YouTube platform has significant potential in enhancing student learning engagement and creativity. Some potential benefits of integrated project-based learning with YouTube include relevant and engaging learning content, real project learning experiences, an interactive and responsive platform, flexibility and adaptability, online collaboration features, opportunities for experimental activities, and constructive feedback. These potentials collectively contribute more significantly to improving students' learning skills and creativity.

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