

## Fostering Wellbeing and Creativity through Project-Based IPAS Learning on the Digestive System

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### ABSTRACT

Science and Social Studies (IPAS) learning at the elementary level often tends to be theoretical and less engaging, resulting in low levels of student creativity and wellbeing. This study aims to describe the implementation of the Project-Based Learning (PJBL) model in IPAS learning on the topic of the human digestive system in fifth-grade elementary school students, to analyze the forms of student creativity in making digestive system teaching aids, and to explore the relationship between active student engagement in projects and aspects of student wellbeing, such as learning enthusiasm, collaboration, and self-confidence. This research used a descriptive qualitative approach with data collection techniques including observation, interviews, and documentation. The results showed that the implementation of PJBL successfully activated students during the learning process, fostered original ideas, encouraged the creative use of simple materials, and promoted innovation in the creation of teaching aids. Furthermore, active student engagement in the project was strongly linked to improvements in student wellbeing aspects, with 91% of students demonstrating high learning enthusiasm, 94% showing effective collaboration, and 82% expressing greater self-confidence during project presentations. These findings indicate that PJBL is effective not only in strengthening students' conceptual understanding of IPAS but also in simultaneously fostering creativity and emotional wellbeing among elementary school students.

**Keywords:** Project-Based Learning, IPAS, Creativity, Student Wellbeing

## 1 Introduction

Science and Social Studies (IPAS) is an integrative subject that helps elementary students understand natural and social phenomena. One of its key topics, the human digestive system, is often seen as abstract and difficult to grasp when taught using conventional lectures or static visuals, resulting in low engagement, limited creativity, and a lack of meaningful learning experiences. In the context of 21st-century education, learning should not only target cognitive development but also support affective and socio-emotional aspects, which contribute to student wellbeing [1].

Project-Based Learning (PBL) is one approach that fosters both creativity and wellbeing through collaborative, real-world projects. However, observations at SDN 4 Mendenrejo revealed that IPAS learning is still dominated by lectures and textbook-based methods, leading to low student interest and understanding. While previous studies have shown that PBL can improve creativity and academic performance, they often focus narrowly on cognitive outcomes rather than holistic student development [2]. This study offers a novel perspective by integrating IPAS content, PBL, and the simultaneous development of creativity and student wellbeing through the creation of digestive system teaching aids. It aims to: (1) describe the implementation of PBL in IPAS learning on the digestive system topic; (2) analyze students' creativity in producing teaching aids; and (3) explore how active project participation relates to aspects of wellbeing such as enthusiasm, collaboration, and self-confidence.

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## 2 Literature Review

The learning of Science and Social Studies (IPAS) in elementary schools aims to integrate students' understanding of natural and social phenomena, but in practice, it is still largely theoretical and lecture-based, offering limited opportunities for active and creative student engagement [3]. To overcome this issue, a contextual and student-centered approach like Project-Based Learning (PBL) is needed. PBL encourages students to engage in real-world, collaborative projects that enhance their creativity and problem-solving skills [4]. Support the effectiveness of PBL in improving creativity, with students showing increased originality and productivity when actively involved in meaningful tasks. One relevant implementation of this model is the project of creating digestive organ teaching aids, which not only deepens students' conceptual understanding but also fosters their self-confidence and satisfaction [5]. Furthermore, PBL supports student wellbeing by promoting emotional, social, and psychological development. Project activities that involve collaboration and creative expression contribute to students' positive emotions, engagement, and sense of accomplishment. Thus, this literature-based review and theoretical framework show that PBL in the context of IPAS learning—particularly through hands-on projects like digestive organ teaching aids—can enhance both student creativity and wellbeing [6].

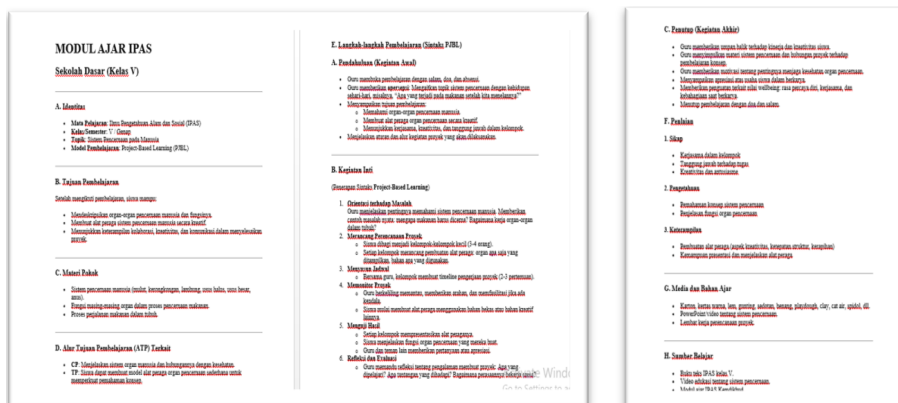
## 3 Research Methods

This study employed a qualitative research paradigm with a descriptive approach to explore the implementation of the Project-Based Learning (PBL) model in IPAS learning, particularly in relation to student creativity and wellbeing during the creation of digestive organ teaching aids. The research was conducted in the fifth-grade class of SDN 4 Mendenrejo in the even semester of the 2024/2025 academic year. Data were collected using observation, interviews, and documentation techniques. Observations focused on students' activities during the PBL process, while interviews with students, the teacher, and the principal provided insight into the learning experience and student development. Documentation included student products, field notes, and photographs of the learning activities. Data were analyzed using the Miles and Huberman model, which involves data reduction, data display, and conclusion drawing. To ensure the validity of findings, source and technique triangulation, as well as peer debriefing, were applied.

## 4 Result and Discussion

### **The Implementation of the Project-Based Learning (PBL) Model in IPAS Learning**

Based on interviews with the fifth-grade teacher at SDN 4 Mendenrejo, IPAS learning on the topic of the digestive system required more innovative approaches to increase student engagement. To address this, the teacher implemented the Project-Based Learning (PBL) model through a project of creating digestive organ teaching aids, aiming not only to improve understanding but also to support student wellbeing. Observations confirmed increased student enthusiasm, active participation, creativity, and collaboration during the project. Students showed creativity through original ideas, problem-solving, and the use of varied materials. The classroom atmosphere also reflected a supportive environment that nurtured student wellbeing. Document analysis of the PBL-based teaching module showed structured stages and embedded values such as cooperation, self-confidence, and reflection, reinforcing the development of both cognitive and emotional aspects in learning.



Gambar 3. Science Teaching Module Document

The triangulation of interviews, observations, and documents revealed that the implementation of Project-Based Learning (PBL) in teaching the digestive system positively enhanced students' creativity and supported their wellbeing. Theory of student wellbeing, which highlights the importance of active engagement, positive relationships, and personal achievement. The teacher effectively applied the PBL model, engaging students in creating digestive system teaching aids, which fostered collaboration, creativity, and self-confidence [7]. Observations and document analysis confirmed that the PBL process, from problem orientation to reflection, was well-executed, promoting both student creativity and emerging wellbeing in the classroom. The implementation of Project-Based Learning (PBL) in teaching the human digestive system followed a structured approach that supported both student creativity and wellbeing. This approach was broken down into several stages:

### Stage 1: Problem Orientation

The teacher introduced the topic by linking the digestive system to real-life situations, stimulating curiosity and critical thinking. This emotional engagement is essential for student wellbeing, as it fosters relevance and active involvement [8].

### Stage 2: Project Planning

Students worked in small groups to design teaching aids for the digestive system. This stage emphasized collaboration, enhancing social relationships and creative thinking through collective decision-making, aligning principles of wellbeing [9].

### Stage 3: Scheduling

A timeline was developed to organize the project, cultivating skills in time management, discipline, and personal responsibility. These competencies contribute to self-efficacy and positive engagement, both key indicators of wellbeing [10].

### Stage 4: Monitoring the Project

The teacher facilitated the process, providing feedback and assisting with challenges. This supported intrinsic motivation, a crucial factor in student wellbeing.

### Stage 5: Testing the Results

Students presented their projects, which built self-confidence, communication skills, and a sense of personal achievement, all vital components of psychological wellbeing.

### Stage 6: Reflection and Evaluation

Reflection allowed students to assess their learning and challenges, fostering self-awareness and a growth mindset—key aspects of wellbeing. The teacher evaluated not just the cognitive outcomes but also creativity, collaboration, and emotional engagement throughout the process.



Gambar 4. Respiratory Organ PJBLProcess

### Forms of Student Creativity in Creating Digestive System Teaching Aids

Based on triangulated data from interviews, observations, and documentation, the implementation of Project-Based Learning (PBL) in the creation of digestive system teaching aids provided significant opportunities for students to demonstrate creativity. Students generated original ideas, such as using recycled materials and designing interactive models. Observations confirmed active group discussions, idea sharing, and problem-solving during the project, while documentation showed diverse designs and creative presentations using narration and visual aids.

These findings, who define creativity in education as the ability to produce original, flexible, and relevant ideas. Furthermore, highlight that creativity in PBL is supported by freedom of expression, task relevance, and social support—all of which were present in this activity. Therefore, students displayed creativity through original design ideas, material flexibility, collaborative development, and innovative project presentations [11].

Tabel 8. Percentage of Students' Creativity Forms in Creating Digestive System Teaching Aids

No	Creativity Aspect	Number of Students Demonstrating This Aspect	Percentage (%)
1	Original Ideas	13 Student	76%
2	Utilization of Simple Materials	15 Student	88%
3	Product Innovation	15 Student	88%
4	Group Collaboration	16 Student	94%
5	Creative Presentation and Delivery	12 Student	71%

The analysis in Table 1 indicates that the Project-Based Learning (PBL) approach effectively enhanced student creativity and collaboration. Most students (76%) demonstrated originality in designing digestive system teaching aids, and 88% showed creativity in using simple or recycled materials, as well as introducing innovative features to represent digestive functions. Collaboration was also high, with 94% of students actively engaging in group planning and execution. Furthermore, 71% delivered their projects creatively through demonstrations or visual aids. These outcomes highlight how PBL fosters creative thinking, problem-solving, and communication skills, while also promoting self-confidence, learning ownership, and overall wellbeing—essential elements of 21st-century education.

## The Relationship Between Students' Active Engagement in the Project and Aspects of Student Wellbeing

Based on the results of observations, interviews, and documentation, students' active engagement in the project of creating digestive system teaching aids not only enhanced their creativity but also had a positive impact on various aspects of student wellbeing. Students' participation throughout all stages of the project — from planning, creation, to presentation — demonstrated a strong link between active involvement and the development of learning enthusiasm, collaboration, and self-confidence.

Tabel 9. The Relationship Between Students' Active Engagement and Aspects of Student Wellbeing

No	Aspect of Student Well-being	Indicators of Student Engagement	Percentage (%)
1	Learning Enthusiasm	Students actively ask questions, participate in discussions, and show initiative during the project	91%
2	Collaboration	Students collaborate effectively in groups, help each other, share tasks, and resolve conflicts	94%
3	Self-Confidence	Students confidently present their project results and explain concepts in front of their peers	82%

The data analysis reveals that the implementation of Project-Based Learning (PBL) significantly supported student wellbeing. A total of 91% of students showed high enthusiasm through active questioning, discussions, and initiative in group work. Additionally, 94% of students engaged in effective collaboration by sharing tasks and resolving conflicts cooperatively, indicating strong social cohesion. Furthermore, 82% of students demonstrated increased self-confidence during project presentations and peer interactions. These findings support Roffey's theory that collaborative and creative learning enhance wellbeing through achievement, connection, and meaningful engagement [12].

## 5 Conclusion

The study concludes that the implementation of the Project-Based Learning (PJBL) model in the fifth-grade IPAS class at SDN 4 Mendenrejo effectively fostered an active, collaborative, and meaningful learning environment. Students demonstrated creativity and innovation in creating digestive system models and showed improved wellbeing through increased enthusiasm, teamwork, and self-confidence. These findings highlight the value of PJBL in enhancing both cognitive understanding and socio-emotional development, emphasizing the need for teachers to design authentic, contextual projects that support 21st-century learning goals.

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