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MAKTABGACHA VA MAKTAB TA'LIMI VAZIRLIGI

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2025

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13.00.01 Pedagogika nazariyasi. Pedagogik ta'limotlar tarixi
13.00.02 Ta'lim va tarbiya nazariyasi va metodikasi (sohalar bo'yicha)
13.00.03 Maxsus pedagogika
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INTEGRATING GOOGLE CLASSROOM AND PROJECT-BASED LEARNING FOR ENHANCED SYNCHRONOUS AND ASYNCHRONOUS EDUCATION

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Abstract: This article examines the use of Google Classroom in education and its potential to combine synchronous (real-time) and asynchronous (self-paced) learning. Particular attention is given to the integration of Project-Based Learning (PBL) with Google Classroom, highlighting its effectiveness, benefits, and challenges. The findings suggest that the hybrid learning model reduces rigidity, fosters student engagement, motivation, and achievement, and proves especially effective in English as a Second Language (ESL) education.

Key words: Google Classroom, Project-Based Learning (PBL), synchronous learning, asynchronous learning, ESL education, student engagement, online learning, digital tools, hybrid learning, collaborative learning, reflective practices, educational technology, digital literacy, learning outcomes, student motivation, virtual classroom, interactive learning, real-time communication, flexible learning environment.

Annotatsiya: Ushbu maqolada Google Classroom platformasining ta'lim jarayonida qo'llanilishi, uning sinxron (real vaqt rejimida) va asinxron (mustaqil o'quvchi tezligida) ta'limni birlashtirishdagi imkoniyatlari tahlil qilinadi. Xususan, loyihaviy yondashuv (Project-Based Learning – PBL) bilan uyg'unlashtirilgan holda Google Classroom'ning samaradorligi, afzalliklari va mavjud muammolari o'rganilgan. Tadqiqot natijalari shuni ko'rsatadiki, gibrid ta'lim modeli qat'iylikni yumshatib, talabalarning faolligi, motivatsiyasi va o'zlashtirish darajasini oshirishga xizmat qiladi. Ayniqsa, ingliz tili ikkinchi til sifatida o'qitiladigan yo'nalishlarda mazkur integratsiya samarali natijalar beradi.

Kalit so'zlar: Google Classroom, Project-Based Learning (PBL), sinxron ta'lim, asinxron ta'lim, ESL ta'limi, talaba faolligi, onlayn ta'lim, raqamli vositalar, gibrid ta'lim, hamkorlikdagi ta'lim, reflektiv amaliyotlar, ta'lim texnologiyalari, raqamli savodxonlik, o'quv natijalari, talaba motivatsiyasi, virtual sinf, interaktiv ta'lim, real vaqt kommunikatsiyasi, moslashuvchan ta'lim muhiti.

Аннотация: В статье рассматривается использование платформы Google Classroom в образовательном процессе, а также её роль в сочетании синхронного (в реальном времени) и асинхронного (в индивидуальном темпе) обучения. Особое внимание уделяется эффективности интеграции с проектно-ориентированным обучением (Project-Based Learning – PBL), её преимуществам и вызовам. Результаты исследования показывают, что гибридная модель обучения способствует снижению чрезмерной строгости, повышает активность студентов, их мотивацию и академическую успеваемость. Особенно эффективным данный подход является в преподавании английского языка как второго (ESL).

Ключевые слова: Google Classroom, Project-Based Learning (PBL), синхронное обучение, асинхронное обучение, ESL образование, вовлечённость студентов, онлайн обучение, цифровые инструменты, гибридное обучение, совместное обучение, рефлексивные практики, образовательные технологии, цифровая грамотность, учебные результаты, мотивация студентов, виртуальный класс, интерактивное обучение, коммуникация в реальном времени, гибкая образовательная среда.

INTRODUCTION

The outbreak of the COVID-19 pandemic urgently required the transition to online education, prompting educational institutions to support teaching and learning with digital tools. Of all these tools, Google Classroom has made its way to the must-have list, providing dual means to enable synchronous (real-time) along with asynchronous (self-paced) learning environments. Before we dive too deeply, one of the core concepts of our study is exposing how the integration of Google Classroom and Project-Based Learning (PBL) can better complement ESL public school education. However, combining these can, in fact, lead to more inclusive and efficient learning, because they can almost always reach different learning styles and paces. Online teaching

has brought the necessity of digital tools to light, and these tools must be adaptable to meet the demands of all types of learners. Google Classroom is a one-stop-shop solution for handling online coursework, facilitating live interactions, as well as ensuring a flexible learning space. At the same time, Project-Based Learning (PBL) encourages active learning by developing real-world problem-solving skills and projects requiring collaboration. If combined, more student engagement, greater motivation, and higher academic achievement are also likely to be seen, particularly in ESL education.

The purpose of this paper is to explore the implementation process, benefits, issues, and effectiveness of applying Google Classroom combined with PBL in the Skills for ESL course. This study specifically intends to:

1. Consider the impact of the bifurcated model on student engagement and motivation.
2. Identify how to implement Google Classroom integration with the PBL model.
3. Provide strategies for overcoming these challenges and making the most of the learning journey.

LITERATURE REVIEW

Research on integrating digital tools with Project-Based Learning (PBL) shows significant impact on student engagement and learning. Blumenfeld, Soloway, Marx, Krajcik, Guzdial, and Palincsar emphasized that PBL sustains motivation and supports deeper learning through authentic tasks. Kokotsaki, Menzies, and Wiggins highlighted that PBL improves collaboration, critical thinking, and creativity when properly scaffolded. Similarly, Burnett, Merchant, Pahl, and Rowsell demonstrated that digital literacy projects enhance classroom practice by encouraging active and interactive learning processes.

The role of Google Classroom as a digital platform has been analyzed in recent studies. Glazunova, Kudryashova, Ivanova, and Mukhacheva underlined its effectiveness in fostering engagement and participation in online learning environments. Friska reported that students perceived Google Classroom as a useful blended learning tool that supports communication and feedback. In ESL education, Han, Yalvac, Capraro, and Capraro showed that combining technology with project-based approaches helps develop language skills, collaboration, and problem-solving abilities. Together, these findings suggest that the integration of Google Classroom and PBL can offer a powerful model for inclusive and effective education.

RESEARCH METHODOLOGY

We used a mixed-methods design that included quantitative and qualitative data collection to conduct the research. The study used a PBL project from the pilot project work of ESL Level 2 students at Westminster International University in Tashkent (WIUT). A total of 81 ESL Level 2 students from WIUT took part in the study. They were divided into 4–5 member groups and participated in two PBL projects (as opposed to one full-size PBL, based at the school campus) targeting:

1) an outdoor project promoting a local site, and
2) an indoor dubbing project.

The data was collected through surveys, interviews, reflective journals, and research diaries in order to obtain both quantitative and qualitative information. Student participation, engagement, perceived challenge, and interest were measured using surveys. The interviews and reflective journals provided further details and constructs to the quantitative data, illustrating the qualitative experiences perceived by students. Questions asked in the survey referred to participation rates, engagement levels, difficulty of projects, and interest levels. The students rated their experiences using a Likert scale to quantitatively measure their engagement and learning outcomes. Open-ended questions further encouraged students to share their ideas and opinions in their own words.

During the project, students kept reflective journals to document experiences, problems encountered, and learning outcomes. These journals allowed the capture of qualitative data that added another layer of understanding to the survey results, helping develop a more holistic view of student engagement and the development of 21st-century skills. A number of students and teachers were invited for semi-structured interviews to reflect on their experiences of Google Classroom usage in the context of PBL integration. These interviews allowed us to gather information on the hybrid model and provided insights into some of its challenges and benefits, as well as possible ways to implement the hybrid model successfully.

ANALYS AND RESULTS

Participation, difficulty, interest, and learning outcome sections of the study are presented along with the findings of this research. Each section presents quantitative data along with qualitative reflections from interviews and reflective journals.

A large number of students participated in the projects, with a participation rate of 98.77%. The engagement index also had a high score (78.3), again indicating strong student engagement. Certainly, this was an improvement since 93.8% of students thought it helped them learn English, and 91.4% would welcome more projects in the future.

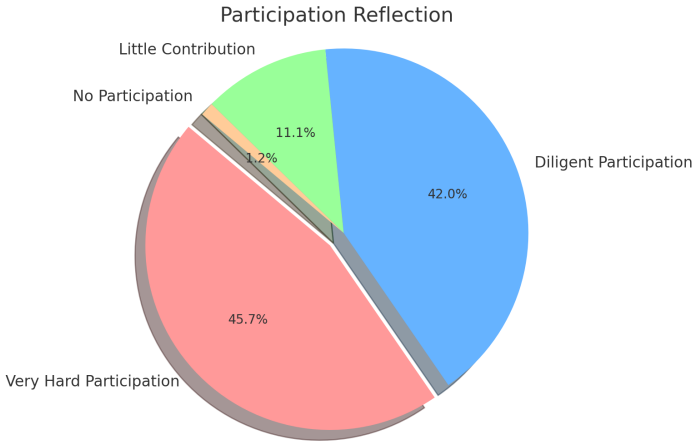

Figure 1: **Participation Reflection Chart**

Difficulty and Interest

The difficulty perception index was 54.325, reflecting a moderate level of challenge. The interest level was 47.25, suggesting that students found the projects fairly engaging. The dubbing project was considered more interesting by 54.3% of the respondents, while 44.4% preferred the advertising project.

Learning Outcomes

The effectiveness of learning outcomes was high, with 94.4% of students reporting significant improvement in vocabulary, teamwork, communication, creative thinking, and self-confidence. Reflective practices and feedback sessions contributed to these outcomes by enabling continuous improvement and self-assessment.

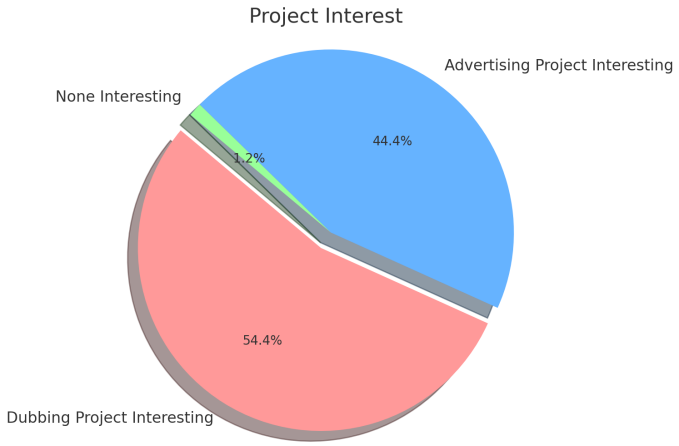

Figure 2: **Project Interest Chart**

Calculations

The following calculations provide a quantitative assessment of the project effectiveness:

- **Participation Rate:**

Participation Rate=(8081)×100=98.77%\text{Participation Rate} = \left(\frac{80}{81} \right) \times 100 = 98.77\%Participation Rate=(8180)×100=98.77%

- **Engagement Index:**

Engagement Index=(0.9×45.7)+(0.75×42)+(0.5×11.1)+(0.1×1.2)=41.13+31.5+5.55+0.12=78.3\text{Engagement Index} = (0.9 \times 45.7) + (0.75 \times 42) + (0.5 \times 11.1) + (0.1 \times 1.2) = 41.13 + 31.5 + 5.55 + 0.12 = 78.3Engagement Index=(0.9×45.7)+(0.75×42)+(0.5×11.1)+(0.1×1.2)=41.13+31.5+5.55+0.12=78.3

- **Difficulty Perception Index:**

Difficulty Index=(0.1×18.5)+(0.5×34.6)+(0.75×46.9)=1.85+17.3+35.175=54.325\text{Difficulty Index} = (0.1 \times 18.5) + (0.5 \times 34.6) + (0.75 \times 46.9) = 1.85 + 17.3 + 35.175 = 54.325Difficulty Index=(0.1×18.5)+(0.5×34.6)+(0.75×46.9)=1.85+17.3+35.175=54.325

- **Interest Level:**

Interest Level=(0.5×54.3)+(0.45×44.4)+(0.1×1.2)=27.15+19.98+0.12=47.25\text{Interest Level} = (0.5 \times 54.3) + (0.45 \times 44.4) + (0.1 \times 1.2) = 27.15 + 19.98 + 0.12 = 47.25Interest Level=(0.5×54.3)+(0.45×44.4)+(0.1×1.2)=27.15+19.98+0.12=47.25

- **Learning Outcomes Effectiveness:**

Learning Outcomes Effectiveness=94.4% Learning Outcomes Effectiveness} = 94.4% Learning Outcomes Effectiveness=94.4%

These metrics provide a quantitative assessment of the project's effectiveness, indicating high participation and engagement, moderate difficulty, significant interest, and substantial learning outcomes.

Combining Google Classroom and PBL creates a balanced ecosystem for learning – controlled yet collaborative, stable yet exploratory. Real-time communication and active participation are promoted by synchronous activities such as discussions and feedback sessions hosted live. By embedding asynchronous activities – collaborative document editing, video presentations – students study at their own pace and can revisit the contents as many times as they like. This hybrid model allows flexibility of learning styles and working schedules, ensuring that ongoing project work, peer collaboration, and reflection are consistently taking place, which is key to PBL.

The following features of Google Classroom allow for both synchronous and asynchronous learning. Integrating it with other Google Workspace tools such as Google Docs, Slides, Sheets, and Forms increases interactions with students and boosts collaborative learning. In addition, Google Classroom enables the use of multimedia material, allowing educators to create multimedia-enhanced, engaging, and interactive educational experiences (Glazunova et al., 2023).

PBL, on the other hand, promotes active learning with problem-solving and collaboration on projects. Through the integration of PBL with Google Classroom, educators can combine the best of both worlds to provide a learning experience that is both inclusive and effective. The hybrid model motivates students to delve into the content, promotes critical thinking, and enables them to apply knowledge in practice (Kokotsaki, Menzies, & Wiggins, 2016).

While there are many benefits, utilizing both Google Classroom and PBL can be challenging due to technological limitations and different levels of digital literacy. Addressing these problems requires providing consistent internet access, distributing devices to those in need, and organizing digital upskilling sessions. Furthermore, the use of multimedia materials with built-in interactive exercises enables more active participation and raises the interest and motivation of students studying online.

Low access to reliable internet and digital hardware can slow the reach of online teaching. To address this, educational institutions should invest in improving internet infrastructure and provide necessary devices to students. In addition, partnerships with technology companies can allow low- or no-cost access to digital tools and services (Hipitronic, Sharma, & Novak, 2022).

Digital literacy among students and faculty may also present challenges, as efficient use of online tools requires adequate training. Training sessions on digital platforms can help fill this gap. User-friendly tutorials and resources, provided for both students and teachers, can offer guidance for navigating these platforms (Friska, 2021).

There are limited opportunities to engage young learners, especially in asynchronous environments. Multimedia content – videos, interactive quizzes, and discussion forums – can improve engagement. The use of gamification elements such as scores, badges, and leaderboards may further stimulate active involvement of students (Dicheva et al., 2015).

IMPLEMENTATION

In order to take full advantage of Google Classroom and Project-Based Learning, educators should consider the following strategies.

By structuring courses with clear purpose and timeline, students better understand expectations and tasks. In addition to organizing course materials, assignments, and feedback, using Google Classroom synchronizes the learning process (Glazunova et al., 2023). The key to student growth is consistent and effective feedback. With Google Classroom, teachers can return assignments and participate in real-time discussions during synchronous sessions. This ongoing feedback and encouragement help students refine their work and maintain motivation (Hattie & Timperley, 2007).

Promoting collaborative learning through group projects and peer reviews can also increase engagement and outcomes. Google Classroom supports online collaboration processes, allowing students to co-edit presentations, consult each other, and provide feedback (Johnson & Johnson, 1989). As Eisner (1985) suggested, promoting reflective practices helps students to become self-aware and improve critical thinking skills. The use of digital reflective journals, discussion threads, or multimedia presentations through Google Classroom stimulates reflective practices and deeper learning (Hidi & Renninger, 2006).

CONCLUSION AND RECOMMENDATIONS

This study demonstrates that integrating Google Classroom with Project-Based Learning (PBL) fosters higher student engagement, motivation, and learning outcomes, particularly in ESL education. The hybrid approach balances synchronous and asynchronous modes, ensuring flexibility, collaboration, and reflective learning.

Recommendations:

1. Institutions should enhance digital infrastructure and provide access to devices for equitable learning opportunities.
2. Teachers should employ a hybrid model that combines real-time feedback with self-paced tasks.
3. Training programs on digital literacy should be organized for both educators and students.
4. Greater use of multimedia and interactive tools is advised to boost motivation and critical thinking.
5. Continuous feedback and reflective practices should be embedded into project work to strengthen outcomes.

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Mas’ul muharrir: Ramzidin Ashurov
Ingliz tili muharriri: Murod Xoliyorov
Musahhih: Alibek Zokirov
Sahifalovchi va dizayner: Iskandar Islomov

2025. №10

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