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The Interplay between Social Media and Collaborative Learning in Project-Based Environments: A Case Study of EFL Students at Moulay Ismail University

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ABSTRACT

This study explores how EFL students use social media for academic collaboration, examining its impact on their collaborative skills and on motivation and knowledge sharing within project-based learning environments. Using an online questionnaire, the research collected data from a purposive sample of EFL students who actively use social media for academic purposes. The survey focused on students' usage patterns, experiences, and perceptions of social media in relation to their academic tasks and group work. The findings reveal that WhatsApp is the most commonly used platform for academic collaboration, with many participants engaging in educational social media activities several times per week. Students reported that social media use positively contributed to their creativity, problem-solving abilities, and critical thinking skills, supporting its potential as a beneficial learning tool. However, the study also identifies challenges, including distractions and unequal participation among group members. A key limitation of the research is its reliance on self-reported data, which reflects students' perceptions rather than their actual behavior. Additionally, the use of a purposive sample limits the generalizability of the results. Future research could incorporate interviews or classroom observations to provide deeper insights. Practically, the study suggests that educators can effectively integrate social media, particularly WhatsApp, into project-based learning by providing clear guidelines and structured tasks to reduce distractions and promote equal participation.

INTRODUCTION

In today's rapidly evolving digital age, the landscape of education is undergoing a profound transformation. The emergence of the information society has reshaped how knowledge is produced, accessed, and shared, prompting educators to rethink traditional pedagogical models. The younger generations—commonly referred to as Gen Y and Gen Z—have demonstrated decreased attention spans and engagement with conventional learning methods, emphasizing the need for innovative educational strategies and tools (Gorsev *et al.*, 2017; Sabaityte & Davidavicius, 2017; Sabaityte *et al.*, 2019; Damy & Plascencia, 2020). Among the various approaches developed in response to these challenges, Project-Based Learning (PBL) has emerged as a promising method that fosters active student participation, critical thinking, and real-world problem-solving.

Project-based learning emphasizes sustained inquiry and teamwork by engaging learners in addressing complex questions or challenges over an extended period. It is widely recognized as an effective instructional model that transforms students from passive recipients of information into active constructors of knowledge (Bie, org, 2014). According to Blumenfeld *et al.* (1991), PBL represents a holistic approach to learning that involves investigating authentic, meaningful problems. This approach not only promotes deep understanding but also cultivates essential 21st-century competencies such as creativity, adaptability, and collaboration—skills that are increasingly important in an ever-changing global

landscape.

In light of the rapid technological advancements shaping modern society, education systems must adapt by emphasizing skill development aligned with future societal demands. The explosion of knowledge in science and technology is driving innovation across all sectors, necessitating a shift in educational priorities. As Issa and Khataibeh (2021) argue, education in the 21st century must prioritize critical thinking and problem-solving, equipping students to navigate and thrive in a complex, dynamic world. To this end, the implementation of effective teaching strategies such as project-based learning has become imperative for fostering these capabilities in students.

Moreover, project-based learning serves as a powerful alternative to traditional instruction, which often inhibits creativity and diminishes student engagement. Conventional classrooms, characterized by one-way information delivery, limited interaction, and rigid assessments, tend to suppress student autonomy and curiosity. In contrast, project-based learning encourages learners to take ownership of their educational journey by nurturing motivation, inquiry, and independence (Ambosaidi & Al Balushi). These features make PBL particularly well-suited for addressing the learning needs of contemporary students and for cultivating an environment of active, experiential learning.

In parallel with these pedagogical shifts, social media platforms have emerged as pervasive communication tools in students' daily lives. Despite their prevalence,

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their academic application, especially within the context of project-based learning, remains underexplored. Although students frequently utilize platforms such as WhatsApp, Instagram, and Facebook to share ideas and coordinate academic tasks, the extent to which these platforms enhance collaborative learning, motivation, and skill development is not well understood. This gap underscores the need for deeper inquiry into how social media can be leveraged to support more effective, interactive learning experiences.

Therefore, this study aims to investigate the interplay between social media usage and the effectiveness of project-based learning among EFL students. Specifically, it explores how students use social media to collaborate and communicate during group projects, examines the impact of social media interactions on the development of collaborative and problem-solving skills, and evaluates the influence of these platforms on student motivation, engagement, and knowledge-sharing. By addressing these objectives, the study seeks to provide valuable insights into how digital tools can enhance modern educational practices and better prepare students for the demands of contemporary academic and professional environments.

Research Objectives

To guide this investigation, the study pursues the following objectives, which highlight the relationship between social media use and the effectiveness of project-based learning.

O1. To explore the ways in which students use social media platforms to collaborate and communicate during project-based learning activities.

O2. To assess the impact of social media interactions on the development of collaborative and problem-solving skills among students engaged in project-based learning.

O3. To evaluate how the use of social media platforms influences student motivation, engagement, and knowledge-sharing in project-based learning environments.

LITERATURE REVIEW

The literature review section examines project-based learning (PBL), focusing on its core requirements, instructional strategies, and effects on both students and teachers. It begins with an analysis of the essential elements for meaningful PBL, including student engagement and real-world relevance, and examines the evolving role of teachers as coaches and mentors. The review also highlights how students become active educators, collaborating with peers to enhance their learning. Additionally, it discusses the impact of project-based learning on student collaboration and communication skills, as well as the integration of technology in enhancing learning experiences. Finally, the review concludes by linking PBL to the development of crucial 21st-century competencies, such as critical thinking and problem solving.

Understanding Project-Based Learning

Project-Based Learning (PBL) has been defined in

various ways, reflecting its broad and adaptable nature in educational settings. Markham *et al.* (2003) describe project-based learning as a structured instructional strategy in which students acquire knowledge and develop skills by engaging in prolonged inquiry that revolves around authentic and challenging questions. This process includes the creation of well-planned tasks and products, aiming to deepen understanding and enhance student competence. Similarly, Jones *et al.* (1997) and Thomas *et al.* (1999) portray project-based learning as a framework that centers education on real-life projects. These projects typically involve students in complex problem-solving, decision-making, and investigative work. They stress that learners work with a high degree of autonomy over extended periods, culminating in the presentation of concrete outcomes that reflect their learning.

Further expanding on this perspective, Solomon (2003) emphasizes that project-based learning requires students to collaborate in groups to solve meaningful, curriculum-based challenges. In this model, students take responsibility for their own learning by collecting information from diverse sources, analyzing and synthesizing it to construct new knowledge. The authenticity of the tasks enhances motivation, as students see a direct connection between their academic work and real-world applications. Throughout the process, the role of the teacher shifts from instructor to facilitator, offering guidance and support while allowing students to direct their own learning paths. This approach not only fosters content mastery but also cultivates essential skills such as communication, critical thinking, and teamwork.

Core Requirements for Meaningful Project-Based Learning

A project holds true value when it meets two key conditions: it must feel relevant and important to students personally, and it must serve a clear educational goal. In other words, for students to fully engage, they need to see the project as something worth their time—something they care about and are motivated to succeed in. At the same time, the project should help them build essential knowledge or skills. When Project Based Learning (PBL) is thoughtfully designed and carried out, it manages to balance both of these needs—connecting with students' interests while also advancing their academic development. This dual focus is what makes PBL a powerful and meaningful approach to education (Larmer & Mergendoller, 2010).

Guiding, Facilitating, and Evaluating: A Teacher's Journey in Project-Based Learning

In project-based learning, the teacher's role evolves across different stages to support student growth and project success. During the pre-project phase, the teacher acts as a knowledgeable guide, assisting students in choosing a topic, sparking ideas through activities like brainstorming or mind mapping, and helping them shape clear project goals and a group proposal. As the project moves into the implementation stage, the teacher shifts to the role of a facilitator, consultant, or even a co-learner—

offering support as students gather information, refine their objectives, plan timelines, and develop the language and academic skills needed for their work. Teachers step in when necessary to redirect impractical approaches, suggest solutions, and respond to student needs. Finally, in the post-project phase, the teacher becomes an evaluator and reflective observer, focusing on what students have learned, guiding self-assessment, and delivering constructive feedback. This stage also involves collecting feedback from various stakeholders—students, mentors, parents, and school authorities—to assess the project’s overall impact and refine future practices (Vasiliene-Vasiliauskiene *et al.*, 2020; Bustamante, 2025).

Bridging Knowledge and Practice: The Impact of Project-Based Learning on Student Collaboration

In Project-Based Learning (PBL), students engage in collaborative work within their teams, moving beyond simple cooperation to true collaboration. This higher level of interaction means students not only take responsibility for their own knowledge but also for the collective learning of the entire team. As a result, it fosters deeper, more meaningful collaborative relationships among diverse groups of students (Zajkov, 2004). Additionally, project-based learning extends the concept of the learning community beyond the classroom. It becomes a dynamic, multidimensional, and sometimes unpredictable experience. Regardless of the subject, students learn essential skills such as conducting research, organizing teams, and effective communication. One key aspect of this process is that students develop the ability to articulate and explain their thoughts, defend their ideas, and engage in constructive dialogue. It encourages students to be open-minded, listen to opposing viewpoints, and learn to advocate for themselves while respecting others’ opinions. Through this, PBL bridges the gap between knowledge acquisition and critical thinking, promoting both practical understanding and lifelong learning (Zajkov & Mitrevski, 2012).

Furthermore, project-based learning addresses the skill gaps often seen in engineering education, such as the lack of teamwork and communication abilities. Many current educational programs fail to provide students with enough practical design experience and do not adequately cover the social, environmental, economic, and legal issues that are integral to modern engineering practice. It can fill these gaps by equipping students with the necessary skills through hands-on projects. It provides opportunities for students with varying abilities and interests to work together in areas such as organization, experimentation, crafting, writing, designing, and drawing. This approach helps develop a diverse set of skills, preparing students for the real-world challenges they will face in their careers (Arends, 1998; Mills, 2003).

Redefining Roles: Teachers as Coaches and Students as Co-Educators

The traditional view of teachers as the sole source

of knowledge is gradually being replaced in today’s classrooms, thanks to widespread internet access and the abundance of expert information available to students. Learners are increasingly taking on the role of educators themselves, often helping their peers, younger students, and even their teachers by sharing newly discovered information. This shift has led to what is known as “side-by-side learning,” where teaching and learning become collaborative experiences. In project based learning environments, teachers evolve into coaches and mentors rather than mere transmitters of facts. Their role focuses more on guiding students in asking questions, forming hypotheses, and finding information, often exploring unfamiliar subjects alongside their students. This approach creates a more dynamic and rewarding classroom experience for educators. Additionally, when students present their projects to broader audiences—through websites or physical products—it fosters wider community engagement. Both students and teachers benefit from this interaction, as teachers gain support, insight, and inspiration from new professional connections and content experts (Goodman, 2010).

From Classrooms to the World: Technology-Driven Project-Based Learning

Technology plays a vital role in enhancing project-based learning by equipping students with a range of digital tools that support both the process and the product of their work. Programs like word processors, spreadsheets, and databases help students organize their ideas, draft essays, analyze data, and manage information effectively throughout their projects. Online communication tools—such as email, forums, and discussion lists—extend collaboration beyond the classroom, allowing students to engage with experts, peers, and communities worldwide. The internet also opens up vast research opportunities by providing access to digital archives, museums, libraries, and geographically distant locations. Students can collaboratively produce creative digital works—ranging from written pieces to multimedia projects—and even take part in virtual simulations that foster real-world problem-solving and global awareness. Most importantly, technology allows student work to be shared with authentic audiences online, moving beyond the traditional teacher-only review and giving students a sense of purpose and accountability in their learning (Solomon, 2003).

Even more, technology plays a central role in project-based learning by enabling the development of virtual environments that foster interaction, collaboration, and a strong sense of online learning communities. Through these platforms, students can actively engage with their peers, share knowledge, and participate in meaningful discussions regardless of location. Online forums, for example, allow learners to exchange experiences and ideas with classmates not only from their own institutions but also from different departments, campuses, and even international settings. The flexibility of these digital spaces

supports communication at any time and from anywhere, which enhances accessibility and connectivity. As a result, these environments encourage the formation of dynamic and supportive learning communities that are essential to the success of project-based learning (Ma, 2022).

Building 21st-Century Competencies through Project-Based Learning

Project-Based Learning (PBL) offers a wide range of benefits compared to traditional instructional methods. It enables students to apply what they've learned to real-world situations, making their learning experience more meaningful and practical. This approach not only fosters academic improvement but also allows learners to devise their own strategies for solving problems, encouraging autonomy and innovation. Throughout the process, students enhance essential skills such as communication, teamwork, and critical thinking. As they become more involved in their projects, their motivation tends to increase due to a deeper sense of engagement. Project-based learning also teaches students how to navigate challenges, adapt to varying situations, and continually refine their abilities. In addition, they cultivate valuable competencies like time management, organization, research proficiency, and leadership. By working in groups, students learn how to evaluate their own progress, give and receive constructive feedback, and reflect critically on their development. Importantly, it fosters both creativity and innovative thinking, which are crucial for effective problem-solving (Gocic & Petkovic, 2018; Quiblat & Ubayubay, 2025).

MATERIALS AND METHODS

The research methodology section outlines the research methodology used to investigate the role of social media in project-based learning. It begins with the presentation of the research problem, followed by research questions that guide the study. The research design employed is exploratory, aiming to gain insights into the topic. A purposive sampling approach is used to select participants who meet specific criteria, such as being EFL students and actively using social media for learning. Finally, the section discusses the ethical considerations in the study, ensuring informed consent, anonymity, and confidentiality for all participants involved.

Research Problem

The integration of social media platforms into education has become increasingly prevalent, yet their potential for enhancing Project-Based Learning (PBL) remains underutilized. Social media offers a unique environment for students to collaborate, communicate, and engage in learning beyond the confines of the traditional classroom. However, while students regularly use platforms such as Facebook, Instagram, WhatsApp, and TikTok for personal interactions, their academic potential for facilitating project-based learning activities is still an emerging field of study. Many students leverage these platforms

to share resources, seek feedback, and coordinate tasks in group projects, yet little is known about how these interactions contribute to deeper learning outcomes or foster collaborative skills essential for success in project-based learning contexts. The current gap in research suggests a need for further exploration into how social media can be more effectively utilized as a tool to support collaboration, creativity, and problem-solving in student-led projects. Understanding the role of social media in project-based learning could offer valuable insights for educators looking to enhance student engagement and promote a more collaborative, interactive learning experience.

Research Questions

To explore the core aspects of social media's role in project-based learning, this study is guided by the following research questions.

- Q1.** How do students utilize social media platforms to support communication and collaboration in project-based learning?
- Q2.** What is the impact of using social media on the development of critical thinking, creativity, and problem-solving skills in students working on collaborative projects?
- Q3.** To what extent does social media usage affect student motivation and engagement in project-based learning activities?

Research Design

In this study, an exploratory research design will be adopted to gain a deeper understanding of the role of social media in project-based learning. This design is ideal for investigating areas with limited existing knowledge or where insights are still emerging. By focusing on exploration, the study will investigate how students use social media platforms to collaborate, communicate, and engage in project-based activities. The goals are to identify key trends and gather insights that could inform both future research and practical applications. Given the evolving nature of the topic, this design will allow for the collection of both qualitative and quantitative data, facilitating a thorough examination of the research questions.

Purposive Sampling

Purposive sampling will be employed to select participants based on two specific criteria. First, the study will focus on EFL (English as a Foreign Language) students, ensuring that the sample consists of individuals who are actively engaged in learning English as a second language. Second, the sample will be restricted to students who actively use social media platforms for learning purposes. This dual focus is crucial to explore the specific ways in which EFL students utilize social media in their educational processes. To achieve this, the online questionnaire will be distributed through Facebook and WhatsApp, ensuring that only those students who meet both criteria—

being EFL learners and social media users—are able to participate. By using this sampling approach, the study aims to target a relevant and specific group of students, providing insights into their unique experiences with social media in the context of language learning.

Ethical Practices in Research

In conducting this study, three key ethical considerations will be observed to ensure the protection of the participants’ rights. First, informed consent will be obtained from all participants. They will be fully informed about the purpose of the study, their role, and the potential risks involved, ensuring that their participation is voluntary. Participants will also be made aware of their right to withdraw from the study at any time without any negative consequences. Second, anonymity will be guaranteed, meaning that no personally identifiable information will be collected or linked to the responses provided. This will ensure that participants’ identities remain protected throughout the research process. Finally, confidentiality will be strictly maintained. All data collected will be stored securely, and any personal or sensitive information will not be shared with third parties. The responses will only be used for research purposes, and no identifying information will be included in the final results or publications. These ethical principles are

crucial to ensure that the study respects the privacy and rights of the participants.

RESULTS AND DISCUSSIONS

In this section, the analysis and interpretation of the data collected from the online questionnaire is conducted. By carefully examining the responses, key patterns, trends, and insights are uncovered to shed light on the subject matter at hand. The goal is not only to organize the data but also to provide a deeper understanding of the findings, offering meaningful interpretations that can guide future actions, decisions, or further research. Through a combination of statistical analysis and qualitative interpretation, a comprehensive overview of the questionnaire results are presented.

Demographic Data Analysis

The data presented below outlines the distribution of EFL students based on gender and age. The survey indicates a more significant proportion of male students (52.4%) compared to females (39.5%). Additionally, a small percentage (8.1%) chose not to disclose their gender. In terms of age, the majority of students fall between the ages of 20 and 30, making up 67.1% of the sample. Students below the age of 20 represent 21.4%, while those above 30 make up a smaller portion, 11.4%.

Table 1: Distribution of EFL Students by Gender and Age

Category	Group	Percentage	Number of Students
Gender	Male	52.4 %	110
	Female	39.5 %	83
	Prefer not to say	8.1 %	17
Age	Below 20	21.4%	45
	Between 20 and 30	67.1 %	141
	Above 30	11.4 %	24

Source: Author’s Data.

The data reveal a more dominant presence of male students in the sample, with 52.4% identifying as male. The age distribution shows a youthful demographic, with a strong concentration of students in the 20-30 age range, accounting for nearly two-thirds of the sample. This suggests a primarily young adult population. The lower percentage of students over 30 may indicate a trend toward younger students in the surveyed cohort. The relatively small group of students who prefer not to disclose their gender also suggests that most are comfortable identifying along the traditional gender spectrum.

Quantitative Data Analysis

Figures below present an analysis of students’ use of social media for project-based learning. It covers various aspects, including the types of tasks commonly carried out using social media, the frequency of usage, who initiates the use of these platforms for academic group work, and the challenges faced during this process. The insights gathered aim to provide a deeper understanding of how social media facilitates or hinders collaboration and learning in project-based environments.

Which social media platforms do you use most often for academic collaboration?

210 responses

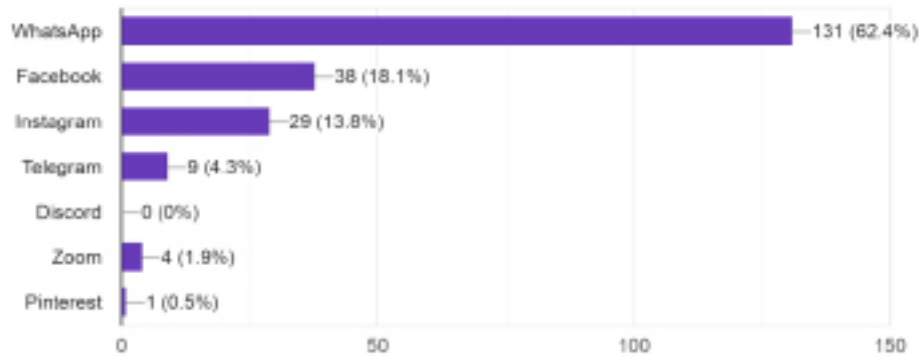


Figure 1: Preferred Platforms for Academic Collaboration

Source: Author's Data.

As shown in Figure 1, the data indicate that WhatsApp is by far the most commonly used social media platform for academic collaboration, selected by 131 students. This suggests that its accessibility, ease of group communication, and real-time messaging features make it the preferred tool for student collaboration. Facebook and Instagram follow at a considerable distance, with

38 and 29 students respectively, indicating some use but significantly less reliance for academic purposes. Telegram and Zoom are used the least, with only 9 and 4 students choosing them, suggesting these platforms may not be as integrated into students' academic routines or may be viewed as less convenient for group work. As

What types of project-related tasks do you usually carry out using social media?

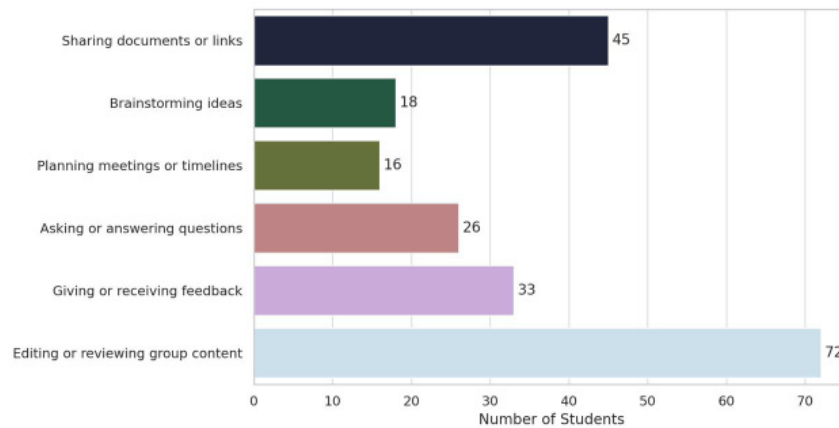


Figure 2: Project-Related Activities on Social Media

Source: Author's Data.

illustrated in Figure 2, the most common project-related task students carry out using social media is editing or reviewing group content, reported by 72 students (34.3%). This suggests that social media platforms are frequently used as collaborative spaces for refining and finalizing shared work. Sharing documents or links is the second most common activity (21.4%), highlighting the role of social media in resource distribution. Tasks such as giving or receiving feedback (15.7%) and asking or answering questions (12.4%) also show notable engagement, reflecting the platforms' use for interaction and support. Meanwhile, brainstorming ideas (8.6%) and

planning meetings or timelines (7.6%) are less frequent, indicating these more structured activities may occur through other channels or tools outside of social media. As presented in Figure 3, the majority of students use social media for project-based learning tasks on a regular basis. A combined 76.2% of students reported using social media either daily (33.3%) or several times a week (42.9%), indicating that these platforms are an integral part of their academic collaboration. A smaller group uses social media once a week (7.1%) or rarely (11.4%), suggesting more limited but still occasional reliance on these tools. Only 5.2% of students indicated

How frequently do you use social media for project-based learning tasks?

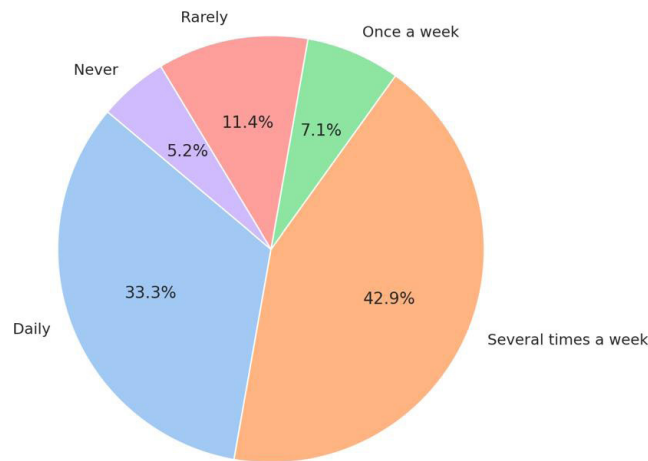


Figure 3: Frequency of Social Media Use for Project-Based Learning

Source: Author's Data.

that they never use social media for project-related tasks, highlighting its widespread adoption as a tool for communication and coordination in academic settings.

The data in Figure 3 reveal a strong integration of social media into students' academic routines, particularly in project-based learning. The fact that over three-quarters of students use social media either daily or several times a week suggests that these platforms are not merely optional tools but have become essential for effective collaboration. This high frequency points to the convenience, accessibility, and immediacy that

social media offers in coordinating group efforts, sharing information, and maintaining ongoing communication.

Additionally, the small percentage of students who rarely or never use social media for academic tasks may reflect a preference for alternative tools (such as email, learning management systems, or in-person meetings), limited access, or possible concerns about distractions or privacy. The overall pattern, however, indicates that social media plays a central and consistent role in how students manage project-based tasks; possibly filling gaps left by more formal institutional platforms.

Who usually initiates the use of social media for academic group work in your experience?

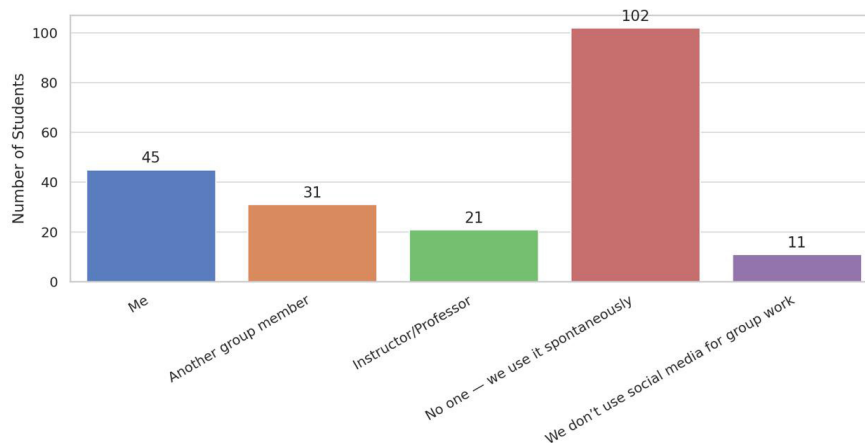


Figure 4: Initiators of Social Media Use in Academic Group Work

Source: Author's Data.

Figure 4 illustrates students' responses to the question of who typically initiates the use of social media for academic group work. Nearly half of the students (48.6%) reported that no single individual initiates the use of social media, indicating that its use emerges spontaneously within the group. A significant portion of students (21.4%) stated

that they personally take the initiative, while 14.8% said another group member usually does. Only 10% indicated that the instructor or professor initiates social media use, and a small minority (5.2%) reported not using social media for group work at all.

These data suggest that the use of social media in academic

group work is largely student-driven and organically integrated into group dynamics. The high percentage of students who reported spontaneous usage indicates that social media has become a natural, almost assumed, mode of collaboration—requiring no formal prompting. This spontaneity may reflect students’ comfort and familiarity with these platforms as communication tools. The relatively low percentage of instructor involvement (10%) suggests that educators rarely guide or encourage the use of social media for academic collaboration. This

could point to a gap between institutional practices and student behavior, where students are independently leveraging tools outside the formal learning management systems. The small group of students who don’t use social media at all (5.2%) might reflect differing preferences, access issues, or a reliance on alternative communication methods. Overall, the figure highlights how social media use for group work is largely informal, student-led, and embedded in peer collaboration practices.

Figure 5 presents the challenges students face when

What challenges do you face when using social media for project-based learning?

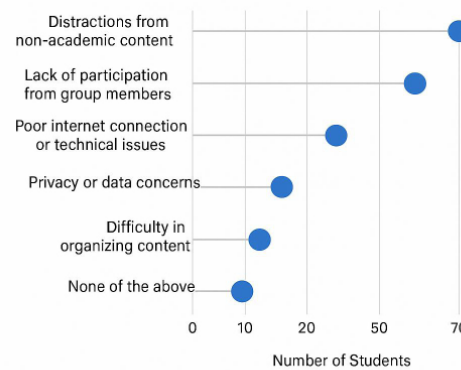


Figure 5: Challenges of Using Social Media Project-Based Learning

Source: Author’s Data.

using social media for project-based learning. The most common issues reported are distractions from non-academic content (33.3%) and lack of participation from group members (32.4%), affecting a significant portion of students. Other challenges include technical issues such as poor internet connection (12.9%), difficulty in organizing content (12.4%), and privacy or data concerns (2.9%). A small percentage of students (6.2%) indicated that they do not face any of these challenges.

The data in Figure 5 highlight that while social media is widely used for academic collaboration, it is not without

its drawbacks. The two most reported challenges—distractions and lack of participation—point to limitations in maintaining focus and engagement within group dynamics. These are inherent risks of using platforms primarily designed for social interaction rather than structured academic work.

Additionally, technical limitations and organizational difficulties suggest that while social media provides flexibility, it may lack the necessary tools for efficiently managing academic content. The relatively low concern for privacy and the small percentage of students who

To what extent does using social media help you develop skills like creativity, critical thinking, or problem-solving during group projects?

210 responses

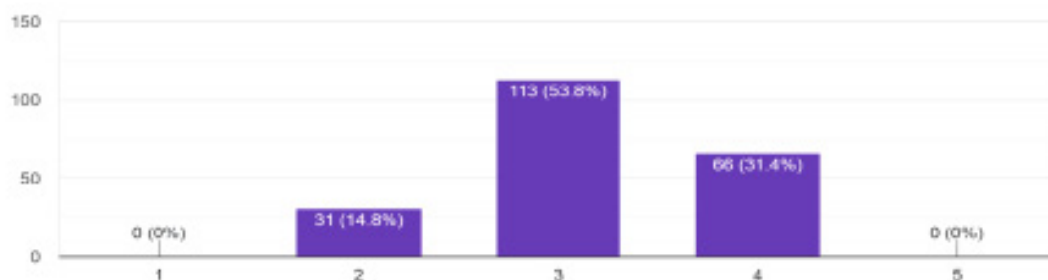


Figure 6: The Impact of Social Media on Skill Development in Group Projects

Source: Author’s Data.

report no issues may indicate general comfort with these platforms, but also underscore the need for better awareness or training in using them effectively for academic purposes.

Figure 6 presents students' perceptions of how much using social media during group projects helps them develop important skills such as creativity, critical thinking, and problem-solving. The responses were measured on a 5-point scale ranging from one (Not at all) to five (Extremely). The majority of students (113) selected "Moderately", followed by 66 students who responded "Very much", and 31 students who chose "Slightly". Notably, no students selected the extremes of the scale: neither "Not at all" nor "Extremely".

The data in Figure 6 suggest that students generally recognize some degree of benefit from using social media in developing cognitive and collaborative skills, but they rarely view it as either entirely ineffective or extremely impactful. The fact that the majority selected "Moderately" implies that while social media supports the development of skills like creativity and problem-solving, it may do so in limited or indirect ways.

The absence of responses at both ends of the scale is particularly telling. It indicates that students neither dismiss social media as useless in this context, nor do they overestimate its educational value. Instead, their views fall in the middle, reflecting a balanced, perhaps cautious, appreciation of its role. This may suggest that while social media can be a helpful tool in group work, it is not a substitute for more structured skill development or intentional instructional strategies.

Qualitative Data Analysis

In addition to the quantitative questions, the online questionnaire also included two open-ended questions designed to gather qualitative insights into students' experiences with social media in project-based learning. These questions allowed participants to provide detailed responses regarding how social media has supported their communication and collaboration during group projects, as well as specific examples of how it has helped them develop key skills such as problem-solving, creativity, and critical thinking. Below are the paraphrased responses to these two questions.

Question 1: How has social media supported your communication and collaboration during project-based learning?

Students reported various ways social media facilitated their communication and collaboration during group projects. Many noted that social media helped them stay connected and share ideas instantly, even without the need for face-to-face meetings. A common theme was the use of platforms like WhatsApp and Google Docs for real-time collaboration, allowing group members to share updates, ask questions, and give feedback promptly. Some students mentioned that group chats provided a more casual environment to practice language skills, while others found social media particularly useful for organizing

meetings and sharing resources. One participant stated, "Social media helped us stay connected and share ideas quickly, even when we couldn't meet in person." Another commented, "We used a group chat to discuss project updates and exchange resources in English, improving our language skills." Overall, social media provided an accessible and flexible platform for communication, file sharing, and managing tasks, significantly enhancing collaboration within the group.

Question 2: Can you describe a specific example where social media helped you improve a skill like problem-solving, creativity, or critical thinking during a group project?

Social media also played a key role in skill development during group projects, especially in fostering problem-solving, creativity, and critical thinking. Several students shared how social media platforms exposed them to a wide range of resources that inspired new approaches to their projects. For instance, students mentioned using YouTube for tutorials, which helped them better understand complex topics and improve their problem-solving abilities. Others found inspiration from platforms like Instagram and Pinterest to enhance their creativity, such as discovering innovative project designs. One student shared, "We used Instagram to search for creative visuals and designs, which helped us think outside the box for our project." Another noted, "I improved my problem-solving skills by watching tutorials on YouTube that explained complex topics in simple English." Additionally, students engaged with content on platforms like LinkedIn and Facebook, participating in discussions that broadened their perspectives and critical thinking. Overall, social media facilitated access to diverse perspectives, resources, and ideas, helping students develop key academic skills.

Summary of Core Findings

- Social media platforms, particularly WhatsApp, were found to be the most widely used tools for academic collaboration among students. A majority of participants reported using WhatsApp (131 students), followed by Facebook (38 students) and Instagram (29 students). This highlights WhatsApp as the dominant platform for project-based learning tasks.
- The frequency of social media use for project-based learning was notably high. A significant portion of students (42.9%) reported using social media several times a week, while 33.3% used it daily. This indicates that social media is an essential and regularly utilized tool for academic collaboration and learning tasks.
- A large percentage of students (48.6%) noted that social media use in academic group work was initiated spontaneously, without any specific individual taking charge. This suggests a more informal approach to using social media for academic purposes, where students rely on the convenience and ease of access for collaboration rather than structured initiation by

- a leader or instructor.
- Despite the benefits of social media for collaboration, students also faced challenges. Distractions from non-academic content and lack of participation from group members were the most significant obstacles, affecting 33.3% and 32.4% of students, respectively. These challenges point to the potential for social media to become a double-edged sword when it comes to focus and engagement.
- Social media was found to positively influence the development of key academic skills such as creativity, problem-solving, and critical thinking. Most students reported that social media supported skill development in group projects, particularly in improving creativity (e.g., finding new ideas and design inspiration) and problem-solving (e.g., access to tutorials and expert advice).
- The initiation of social media use in group work showed varied patterns. While 21.4% of students initiated the use of social media themselves, many students (48.6%) reported using it spontaneously. This indicates a flexible and adaptive approach to collaboration, where students often decide the best tools to use based on immediate needs rather than formal instructions.
- Social media platforms facilitated effective communication and collaboration by enabling students to share documents, ask questions, exchange feedback, and organize meetings. The use of group chats, Google Docs, and file-sharing platforms were particularly appreciated for their convenience and real-time interaction.
- A number of students mentioned that using social media for group projects helped them improve their English skills, particularly in reading, writing, and communication. The practice of discussing ideas and exchanging feedback in English was cited as an opportunity for language development in a collaborative setting.

These main findings highlight how social media is playing a significant role in shaping the academic collaboration experience, while also pointing out the challenges that need to be addressed for it to be more effective. The study shows that social media is widely used for academic purposes, helping students develop important skills, though issues such as distractions and uneven participation remain key concerns.

RESULTS AND DISCUSSION

The discussion section aims to interpret and contextualize the main findings of the study by examining their relevance. It begins with an analysis of how the results contribute to a deeper understanding of student collaboration and communication through social media in project-based learning. The section also highlights the significance of these findings in relation to skill development, engagement, and language improvement. Furthermore, it explains how the results align with and fulfill the research

objectives set out at the beginning of the study. Finally, the discussion draws comparisons between the current findings and the existing literature, identifying areas of agreement as well as divergence to better position this study within the wider body of educational research.

Interpretation of the Findings

The study revealed that social media—particularly WhatsApp—is deeply embedded in students’ academic collaboration practices, especially within project-based learning contexts. Students reported using social media platforms frequently, with many engaging on a daily or weekly basis. Interestingly, the use of these tools often emerged spontaneously, rather than being initiated by instructors or specific group leaders. This points to an informal, student-driven mode of collaboration where convenience and accessibility are prioritized. While social media supported essential academic skills like creativity, problem-solving, and critical thinking, students also encountered common challenges—most notably distractions from non-academic content and lack of participation from some group members. These findings illustrate that while social media has clear educational value, it also introduces new dynamics that must be managed for effective collaboration. Moreover, many participants noted how social media improved their English communication skills, suggesting added linguistic benefits beyond academic coordination.

Significance of the Findings

The significance of these findings lies in how they reflect the evolving role of digital platforms in higher education, especially in collaborative, project-based learning environments. First, the high reliance on WhatsApp and other social media tools shows that students are naturally integrating technology into their academic routines in ways that support both learning and communication. This reinforces earlier literature emphasizing the value of digital tools in extending learning beyond the classroom and enhancing peer-to-peer collaboration. Additionally, the spontaneous and student-led use of social media underlines a shift toward more autonomous learning practices, where learners actively choose the tools that best support their needs.

The findings also highlight practical areas for educational improvement. The dual nature of social media—as both a collaborative enabler and a source of distraction—suggests the need for clearer guidance from educators on how to balance its benefits and risks. The study further underscores the potential of social media as a language learning tool, especially in multilingual or English as a Foreign Language (EFL) settings. This added linguistic value enhances the platform’s relevance in developing not only academic but also communicative competencies. Overall, the study contributes to a growing body of evidence suggesting that when used thoughtfully, social media can significantly enrich the collaborative learning experience and foster essential 21st-century skills.

Alignment of Findings with Research Objectives

The study findings clearly align with the overarching aims set out in the research objectives. To begin with, the data illustrate the central role that social media platforms—particularly WhatsApp—play in student communication and collaboration during project-based learning. Students used these platforms not only to exchange ideas and updates but also to coordinate meetings, share files, and offer feedback in real time. The spontaneous and frequent use of social media reflects a student-led approach to teamwork, suggesting that these platforms have become vital tools for academic collaboration beyond traditional classroom boundaries.

In addition, the findings emphasize how social media interactions contribute to the development of essential academic skills. Many students reported that their experiences with these platforms improved their creativity, problem-solving abilities, and critical thinking. By engaging with tutorials, brainstorming solutions, and analyzing diverse perspectives shared online, students enhanced their cognitive and collaborative capacities. This indicates that social media is not just a communication tool, but also a meaningful space for skill-building and reflective learning in group project contexts.

The study also found that social media played a positive role in increasing student motivation and engagement. Frequent interactions, quick access to information, and opportunities for peer support fostered a sense of belonging and accountability within teams. Moreover, using social media in English provided a natural environment for language practice and development. These dynamics contributed to more active participation and deeper involvement in learning activities, demonstrating that social media supports not only knowledge-sharing but also sustained interest and collaboration throughout the project-based learning process.

Connecting Current Findings to the Literature Review

The final analysis of this study reveals significant alignment with several claims made in the reviewed literature regarding the role of social media and project-based learning. To begin with, the widespread use of WhatsApp as the preferred tool for academic collaboration reinforces the idea that digital platforms are crucial in supporting communication and teamwork. This supports Solomon's (2003) assertion that online communication tools extend learning beyond the classroom and enable students to engage with broader communities.

Additionally, the high frequency of social media use—where many students reported using it daily or several times a week—demonstrates the integral role of technology in academic tasks. This finding aligns with Ma's (2022) view that digital environments foster continuous interaction and support the formation of learning communities. The spontaneous use of social media without structured initiation from an instructor further supports Goodman's (2010) concept of “side-by-side learning,” in which

students increasingly take ownership of their learning and collaborate as equal contributors.

However, the study also points to challenges such as distractions and lack of group member participation. These issues reveal limitations not deeply addressed in the reviewed literature, offering a nuanced perspective that while digital tools can enhance collaboration, they can also hinder productivity when not managed effectively. This suggests a need for guidance or digital literacy strategies, which the literature only partially acknowledges.

Regarding skill development, the findings demonstrate that social media helps students enhance their creativity, problem-solving, and critical thinking—particularly through exposure to diverse content and resources. This observation aligns strongly with the views of Gocić & Petković (2018), who emphasized that project-based learning fosters such skills through active student engagement. Furthermore, Zajkov & Mitrevski's (2012) point that collaboration in PBL environments strengthens students' communication skills.

Finally, the role of the instructor appeared to be minimal in initiating the use of social media, which may diverge from the model proposed by Vasiliene-Vasiliauskienė *et al.* (2020), where teachers are expected to actively support and scaffold student work at different phases. This contrast may indicate that in student-led or tech-enabled settings, teacher involvement may evolve even further than the literature currently suggests.

Concluding Remarks

Taken together, while the findings of this study highlight the significant role social media plays in supporting project-based learning among EFL students, it is my view that its true educational value lies not only in facilitating communication but also in transforming the nature of collaboration itself. Social media has reshaped how students engage with content, with each other, and with the learning process. When used purposefully, these platforms have the potential to cultivate independent thinking, foster creativity, and encourage a more student-centered approach to learning. However, their effectiveness depends largely on how intentionally they are integrated into academic tasks. Without clear guidance and structure, social media can lead to distraction and disengagement. Therefore, I believe that educators must strike a careful balance—embracing the flexibility and familiarity that social media offers while ensuring it is aligned with clear pedagogical goals. This integration should be seen not as a replacement for traditional methods, but as a dynamic supplement that, when strategically used, can enhance the depth and quality of student learning in project-based environments.

CONCLUSION

This study highlights social media's vital role in academic collaboration within project-based learning (PBL) for EFL students, with WhatsApp as the most used platform. Findings show these tools boost creativity, problem-

solving, and language skills, suggesting a need for their formal integration into curricula. However, challenges like distractions and unequal participation require structured guidelines for effective use in education. Educators should strategically integrate social media to create more interactive and collaborative learning environments, enhancing student engagement and learning outcomes. Future research should compare platforms' effectiveness, include diverse student populations, and conduct longitudinal studies on long-term skill development impacts. Developing best practices to mitigate distractions and ensure fair participation is essential. The study's limitations include its narrow focus on a single EFL group, a small sample size, and reliance on self-reported data, limiting generalizability. The unexamined role of instructors and privacy concerns are key areas for future investigation. A mixed-methods approach is recommended for a more comprehensive understanding of social media's impact on academic collaboration. This study provides a foundation for future research to optimize social media for education, addressing its challenges and ensuring responsible implementation in academic settings.

Potential Conflicts of Interest

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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