Using Social Media to Enhance Project–Based Learning in Caribbean Higher Education: A Case Study

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Abstract

Social media's transformative potential offers Caribbean educators innovative approaches to project–based learning (PBL) in higher education. This exploratory case study investigates the integration of digital platforms in a health communication class within a Caribbean academic context, examining how social media can enhance student engagement and learning outcomes. Students developed theory–driven digital health messages and executed mini–campaigns across social media platforms. Utilizing qualitative methodologies, including student reflections and instructor observations, the research analysed pedagogical dynamics. Key findings reveal that strategically structured social media–based PBL enables students to cultivate real–world communication skills while practically applying theoretical frameworks. The study demonstrates social media's capacity to create motivational, contextually relevant learning environments that support hands–on creative experiences. While highlighting the potential of digital pedagogies, the research also underscores the importance of implementing social media interventions with institutional sensitivity and robust ethical considerations.

Keywords: project–based learning, social media, campaign strategies, higher education, pedagogy

Introduction

The proliferation of social media has equipped educators with innovative strategies for teaching and assessment. Researchers have extensively documented the advantages of digital platforms, highlighting their potential to enhance student engagement, collaboration, and learning outcomes (Han & Shujun Han, 2022; Safapour et al., 2019; Barclay et al., 2018; Greaves, 2024; Rafiq et al., 2024). These benefits are particularly pronounced in communication classrooms, where social media can serve as powerful tools for facilitating classroom interactions and developing critical thinking skills. Given social media's fundamental objective of communication, integrating these platforms into a communication classroom offers a synergistic opportunity to explore non–traditional curriculum implementation such as project–based learning (PBL).

These platforms were originally designed to facilitate communication between individuals and groups (Carr & Hayes, 2015; Dhanwal, 2023), making them a natural fit for communication-focused educational environments. Students can collaborate on projects using platforms they already understand and engage with daily, making the learning experience more relevant

and accessible (Adekantari et al., 2020; Guillén-Gámez et al.; 2024; Jewpanich & Piriyasurawong, 2015; Mendez & Lopez, 2021). This integration also allows students to develop digital literacy and professional communication skills that are increasingly essential in today's workplace, while simultaneously mastering traditional communication concepts through practical application rather than theoretical study alone (Liu et al., 2022; Wang et al., 2025).

The learning process inherently demands collaboration, shared resources, and multifaceted feedback from peers, audiences, and instructors. By integrating social media into PBL, educators can cultivate a synergistic learning environment that facilitates innovative educational experiences. Students can leverage these platforms to share resources, exchange constructive feedback, and engage in meaningful dialogues about their projects. Such a collaborative approach not only elevates the quality of final projects but also fosters the development of critical interpersonal and communication skills essential for success in health communication and professional settings (Almulla, 2020).

This study aims to explore the integration of social media and PBL in Caribbean higher education contexts, examining the potential for digital pedagogies to enhance student engagement and learning outcomes. By investigating students' and educators' experiences with social media–supported PBL, the research seeks to develop contextually relevant strategies for technological integration that respect the region's unique cultural and educational landscape. The objectives include analysing the alignment between social media platforms and PBL principles, documenting the challenges and opportunities of digital learning approaches, and generating insights that can inform institutional pedagogical innovations. Ultimately, the study aspires to contribute to the decolonization of educational technologies by centering Caribbean perspectives and experiences in understanding digital learning transformation. The significance of investigating social media integration with PBL in Caribbean educational contexts extends beyond methodological innovation to address critical regional educational

challenges (Montoya et al., 2023). Such research can potentially transform pedagogical practices in small island developing states, where technological infrastructure and educational resources are often constrained, by providing nuanced insights into contextualized digital learning strategies (Wilkinson, 2024).

The study addresses a critical gap in understanding how Caribbean students negotiate digital learning environments, offering valuable perspectives on creating culturally responsive pedagogical approaches (Wilkinson et al., 2024). By examining the intersection of social media and PBL, this research can inform institutional strategies for enhancing student engagement, developing critical digital literacies, and preparing Caribbean learners for increasingly globalized professional landscapes (Montoya et al., 2023). Moreover, the study contributes to broader conversations about technological adaptation in postcolonial educational settings, potentially providing a model for other Global South contexts navigating digital pedagogical transformations (Wilkinson et al., 2024). The findings reveal that both the class facilitator and the students derived significant benefits from this approach, demonstrating social media's potential as a contextual digital pedagogy within the Caribbean.

Literature Review

Project–based Learning

Project–based learning (PBL) is an educational approach fundamentally rooted in constructivist principles. At its core, PBL is guided by three pivotal principles: "learning is context–specific, learners are involved actively in the learning process, and they achieve their goals through social interactions" (Kokotsaki et al., 2016). This student–centered methodology has gained significant traction, particularly in higher education settings. Empirical research has consistently highlighted PBL's multifaceted benefits. Studies demonstrate its effectiveness in enabling students to solve and evaluate problems, design innovative solutions to real–life

challenges (Almulla, 2020) and cultivate higher–order thinking skills (Han & Shujun Han, 2022). Perhaps most notably, PBL's remarkable capacity for fostering collaboration between students and educators stands out as a defining characteristic (Almulla, 2020; Lasauskiene & Rauduvaite, 2015). As Kokotsaki et al. (2016) emphasize, this collaborative focus is fundamental to PBL, serving as the mechanism through which shared goals are realized; culminating in comprehensive end–products. Beyond problem–solving and collaboration, PBL has proven instrumental in meeting broader educational objectives. Researchers have documented its potential to help college students develop empathy (Almulla, 2020), acquire essential life skills (Wurdinger & Qureshi, 2015), and facilitate interdisciplinary integration (Rice & Shannon, 2016).

In the Caribbean context, effective Project–Based Learning (PBL) implementation demands rigorous, culturally responsive, and evidence–based standards. Larmer (2015) and Larmer et al. (2015) propose a gold standard framework for PBL, which encompasses several critical elements: presenting a challenging problem or question; sustaining inquiry, ensuring authenticity; empowering student voice and choice; providing opportunities for reflection, critique, and revision; and producing a public–facing product. These standards are particularly relevant for Caribbean educational environments as help to address regional problems and allow for the emergence of authentic problemsolving techniques which maintain local realities and resonate community needs (Samuel, 2024).

Complementing this framework, Kokotsaki et al. (2016) outline additional guiding principles crucial for successful PBL implementation which can be particularly transformative in Caribbean educational contexts. These include strategic time management; comprehensive student orientation; cultivating a culture of self–management; effective group dynamics; engaging external stakeholders from local communities; leveraging technological resources appropriate to regional infrastructure; and implementing robust assessment and evaluation

mechanisms that recognize diverse learning expressions. Historical and contemporary research converges on several key insights salient to Caribbean educational contexts. The most effective projects are characterized by novelty, authenticity, intellectual challenge, and collaborative potential, with a strong emphasis on student autonomy (Kokotsaki et al., 2016). Recent scholarship further refines these principles, advocating for comprehensive support structures for students and educators, balanced instructional approaches, assessment methodologies that prioritize reflection and peer evaluation, and meaningful opportunities for student choice and independence (Gutiérrez–Ujaque, 2024; Maringe, 2017; Samuel, 2024). These principles serve as a comprehensive guide for implementing PBL in Caribbean collegiate environments, and providing a robust framework for educational innovation, student engagement, and a pedagogy that reflects Caribbean communal values and the unique challenges faced by Caribbean students and educators.

Social Media in the College Classroom

Social media platforms have revolutionized student engagement in higher education, offering innovative outlets for global interaction and collaborative learning. Social networking sites enable users to express beliefs and interact across geographical boundaries (Han & Shujun Han, 2022). In the Caribbean educational landscape, the inherent collaborative nature of these platforms offers transformative potential for pedagogical innovation. These platforms facilitate diverse educational activities, including group projects, discussions, resource sharing, real–time engagement, and participatory learning (Suebsom, 2020; Tung et al., 2024; Watson, 2020). By enabling collaborative interactions that respect Caribbean students' cultural backgrounds, social media platforms can serve as critical tools for democratizing educational access and knowledge production (Maringe, 2017). Such platforms become especially significant in small island contexts, where technological infrastructure and educational resources are

often constrained, providing opportunities for innovative learning experiences that center student agency and cultural relevance (Samuel, 2024).

Researchers have extensively documented the multifaceted educational potential of social media. Elnaz Safapour et al. (2019) highlight its capabilities for sharing information, enhancing learner engagement, facilitating peer–to–peer learning; and promoting critical thinking, self–directedness, and self–monitoring. Social networking sites have proven particularly effective in flipped classroom models, enabling students to fully immerse themselves in learning experiences (Veldthuis et al., 2020). Additionally, Nuraini et al. (2020) emphasize how social media diversifies learning environments, empowering students with greater control over their educational processes and activities, including intrinsic motivation for task completion. Empirical studies further suggest that social media can significantly improve students' motivation and language proficiency (Asrifan & Dewi, 2023).

The transformative potential of social media extends beyond traditional classroom constraints. These platforms enable student autonomy by creating communication spaces that transcend physical and virtual classroom limitations (Oh et al., 2020). By eliminating time, access, and distance barriers, students can learn flexibly, accessing resources and global information at will. These characteristics make social media particularly promising for PBL as they can address five of the six principles for successful PBL implementation (Kokotsaki et al., 2016). Social media facilitates authentic work creation, student voice and choice, reflection opportunities, and serves as a platform for launching public products, especially in contexts such as health communication.

The COVID–19 pandemic accelerated social media's educational integration. Institutions rapidly adopted web–based platforms to maintain educational continuity. Khan (2021) documented successful implementations in Pakistan, where Facebook Live and Google Meet proved crucial for student engagement. While some studies indicated varying effectiveness across different educational domains (with theoretical classes benefitting more than practical ones), the pandemic underscored social media's potential to bridge institutional–student gaps (Nadeak, 2020).

However, the literature also acknowledges significant challenges. Nuraini et al., (2020) warn about potential risks including online harassment, bullying, and platform addiction. Data security concerns are substantial, with Tung et al. (2024) highlighting the risks of unauthorized information access and inadequate platform security. Taylor et al. (2023) further caution about privacy vulnerabilities, noting that online identifiers can be inadvertently shared. Critical considerations extend to access equity and facilitator preparedness. The digital divide can exacerbate existing student disparities, potentially causing frustration and learning outcome delays (Hrastinski, 2019). Motivational research reveals mixed findings, with some platforms enhancing student engagement while others create potential distractions (Van den Beemt, 2020; Han & Shujun Han, 2022; Wen & Piao, 2020). Additionally, not all educators possess the necessary skills to effectively leverage these technological tools (Van den Beemt et al., 2020).

Research exploring social media's integration with PBL reveals nuanced insights. Oh et al., (2020) found students to be initially hesitant about educational social media use, primarily due to privacy concerns. This concern is salient to Caribbean contexts where there is limited and underdeveloped technological infrastructure (Montoya et al., 2023; Wilkinson et al., 2024). Nevertheless, benefits emerged, including student accomplishment, learning flexibility, enhanced communication, and reduced spatial–temporal constraints. Multiple studies consistently demonstrated improvements in problem–solving, critical thinking, and overall learning outcomes when integrating social media with PBL (Adekantari et al., 2020; Palsodkar et al., 2023; Jewpanich & Piriyasurawong, 2015; Rosiyanah et al., 2019). Noteworthy exemplars include a Facebook study highlighting learning flexibility (Sato et al., 2013) and a Thai research project using Telegram to improve EFL students' communication skills, where online project

discussions dramatically enhanced student interactions (Lubis et al., 2020).

Research has demonstrated that social media can facilitate innovative pedagogical approaches, particularly in project–based learning, by providing platforms for authentic work, reflection, and global communication. However, successful implementation requires careful consideration of contextual, technological, pedagogical, and ethical dimensions, recognizing both the powerful learning potential and the inherent limitations of these digital platforms. Additionally, there is a paucity of research about social media integration in the Caribbean classroom. Against this backdrop of technological innovation and educational complexity, this study seeks to explore the intersection of social media and project–based learning through the following research questions:

1. To what extent does social media use in Caribbean higher education align with and support the core principles of project–based learning?

2. What insights emerge from integrating project–based learning with social media in Caribbean higher education?

3. How do students perceive and experience the incorporation of social media in their learning environment?

Methodology

This study employs an exploratory case study design. This design is used to answer how and what questions and have tested qualitative underpinnings (Bhatta, 2018; Yin, 2014). Case studies represent a qualitative research approach that enables researchers to conduct comprehensive, multi–dimensional analyses of complex phenomena. Additionally, they make room to explore complex social phenomena within their natural settings (Creswell & Poth, 2018). The case study approach has been widely used across various educational contexts, demonstrating its versatility and depth of insight. Recent research has leveraged this methodology to investigate critical areas in education, including

project–based learning with gamification strategies (Zhang & Watson, 2025); technology integration in college classrooms (Chasokela et al., 2025); digital transformation in universities (Xiao, 2023); sustainable development in higher education institutions (Wright et al., 2022); and special education interventions (Kratochwill et al., 2012). The study was approved by the ethics committee of the university.

Exploratory case studies allow researchers to investigate contemporary phenomena within their real–world context, especially valuable in Caribbean settings where limited prior research exists on how PBL can be merged with social media in the classroom. This methodological approach enabled an in–depth examination of contextual conditions, facilitating the generation of contextually-grounded theory that can highlight the Caribbean. Moreover, the flexibility of the exploratory case study design supports the capture of multiple sources of evidence, which is crucial in capturing the intricate social dynamics characteristic of Caribbean research environments (Yin, 2014).

A single case was chosen for this study for several reasons. The exploratory nature of the study demanded an in–depth, contextually-rich investigation that a single case could provide, allowing researchers to thoroughly examine the complex interplay between social media and project–based learning (Yin, 2018). As Stake (2005) argues, single case studies are particularly valuable when investigating "bounded systems" with unique characteristics, which align with the distinctive educational context of Caribbean higher education institutions. The complex cultural and technological dynamics at play require what Flyvbjerg (2006) describes as "context–dependent knowledge," which is best captured through intensive study of a representative case. Furthermore, as Baxter & Jack (2008) note, case studies are ideal when the boundaries between the phenomenon (social media use in education) and context (Caribbean higher education) are not clearly evident. The representative case also fits into the focus on student perceptions and experiences in this study, allowing for in–depth and rich assessment (Merriam & Tisdell, 2016).

This further enabled deep engagement with student voices. Finally, this approach aligns with Creswell and Poth's (2018) assertion that single case designs are appropriate when examining innovative practices in specific educational contexts, potentially establishing what Patton (2015) refers to as "information–rich cases" that can inform future educational practice in the region.

Site and Participants

The study was conducted at a university in Jamaica, in an upper–level health communication course. This module is offered at the university as an elective where any student, regardless of their major program, can sit the course which introduces students to the theories and basic design principles of health communication. The specific aims included helping students to: understand the contexts and role of communication in promoting and maintaining health and wellness; understand the correlation between theory and practice in health communication settings and interventions; choose relevant and appropriate theories/ strategies for message creation; understand the role of audience analysis in the creation of targeted messages; create simple health communication messages; know how to formulate a mini-health communication intervention; and, appreciate the importance of monitoring and evaluation in health communication interventions.

The course was offered remotely through the university's learning management platform – Moodle. Moodle is a Learning Management System (LMS) that allows educational institutions to set up online courses using a multiplicity of features, including hosting course materials, synchronous and asynchronous presentations, assessments, and other educational features (Moodle, 2022). The course was offered using a combination of both synchronous and asynchronous presentations. The class met twice weekly for a 1-hour lecture and a 2–hour tutorial. The tutorial sessions also doubled as workshop spaces for students to be guided through completing their assignments and to present their work for feedback. The course's assessment

structure incorporated social media as a central component, requiring collaborative work among students. Based on enrollment numbers, the class was organized into two distinct groups. For their communication campaign, each group undertook the task of identifying a health issue with specific Caribbean relevance. Following this selection, groups conducted audience analysis to determine the most appropriate demographic target for their health messages.

There were 12 students who signed up for this class. However, after the first 2 weeks, there was an attrition of 4 students, so 8 students completed the course at this offering. This number included 6 women and 2 men. None of the students were communication students. Their majors ranged from engineering to business and hospitality. They initially developed individual messages, applying theoretical frameworks and strategic approaches covered in the course curriculum. These preliminary message drafts underwent a structured workshop process, where students received comprehensive feedback from peers and from the course facilitator. Following this formative assessment phase, students refined their messages based on the collective input received. The culminating phase involved collaborative integration of individual contributions, with group members combining their revised visual elements to create cohesive campaigns. These finalized campaigns were then launched on social media platforms, allowing students to experience authentic health communication implementation in digital environments.

The message design assignment required students to create their messages for a social media channel of their choice. They were graded for using message design strategies and elements; use of theory; appropriateness for the target audience; and oral explanation of design choices.

Group 1. This group focused on HIV/ AIDS prevention and targeted their messages to young adults, 19–24 years old. They strategically incorporated credible role models to enhance message persuasiveness, securing the participation of the reigning Ms Jamaica Universe as a central figure in both their video production

and poster design. This approach leveraged social cognitive theory's concepts of observational learning and identification with aspirational figures. The group augmented their persuasive appeal through carefully selected popular music that served as an auditory backdrop in their video, while simultaneously incorporating testimonial evidence on their static poster display — a dual–channel approach to message reinforcement. Since they were required to use the McGuire's Hierarchy of Effects framework, this was evident in cross–platform message consistency and unified branding elements, particularly evident in deliberate colour scheme coordination and music selection continuity, which facilitated improved message recognition and recall.

Group 2. The second group addressed hypertension prevention, targeting persons expertise–based persuasion strategy was employed, prominently featuring statistical evidence from the World Health Organization on poster materials — a technique that enhanced message credibility through association with authoritative institutional sources. Additionally, the visual communication strategy demonstrated demographic targeting through imagery that clearly identified and represented their intended audience age group. The inclusion of relatable role models who demographically matched the target audience further strengthened identification potential and message relevance. The campaign also exhibited cross–platform message consistency, with uniform persuasive elements maintained across all channels. The selection of poster–based dissemination represented an appropriately aligned medium for their demographic target.

The teams engaged in a comprehensive collaborative planning campaign process. They established the campaign's primary objectives and developed a structured work plan to achieve these goals. Planning included strategic decisions about appropriate social media platforms for content distribution and carefully considered posting frequency to optimize engagement. The teams were required to implement clear divisions of labour, with specific responsibilities assigned to each member based on individual strengths and expertise. They created and submitted a detailed timeline to ensure timely execution of all campaign elements. Additionally, they conducted thorough budgetary planning to allocate resources effectively across all campaign components. This systematic approach gave students the required real–world project experience. Table 1 summarizes the choices that each group made regarding their health focus, target audience, medium, and social media platforms.

Table 1

Table highlighting students' message design choices

	Group 1	**Group 2**
Health focus	HIV/AIDS	Heart Disease
Audience	19 – 24 years old	Over 50 years
Theory	Social Cognitive Theory	Health Belief/Social Cognitive Theory
Media	Posters, Video	Posters
Social media platform	TikTok, Instagram	TikTok, Instagram

The design of this assignment included requiring teams to develop a monitoring and engagement plan as the culminating component, though implementation of these plans was intentionally excluded from the assessment requirements. This pedagogical decision was informed by the elective nature of the course and the multi–disciplinary backgrounds of the enrolled students, who were not communication majors. The instructional approach prioritized conceptual exposure to monitoring and evaluation principles while acknowledging the students' academic workload constraints across their primary fields of study.

This balanced approach allowed students to gain valuable theoretical understanding of campaign assessment methodologies without imposing the additional time and resource demands that full implementation would entail, thus maintaining appropriate academic expectations for non–specialist students engaging with communication practices. The assignment guidelines specified a 1–week campaign duration. The monitoring and engagement plan directed students to critically analyze several key dimensions:

1. Goal achievement assessment, reflecting on measuring possible outcomes against predetermined campaign objectives.

2. Identification and reflection on possible multidimensional campaign consequences, including positive, negative, and neutral impacts.

3. Engagement analysis, with specific attention to what could be high–performing content and the qualitative nature of audience interactions.

4. Strategic recommendations for campaign optimization in a hypothetical extended implementation scenario.

5. Reflective analysis of key insights gained regarding health communication planning and execution processes.

Addressing Ethical Challenges

The use of social media in the project–based learning environment presented several ethical challenges that required careful consideration and management. Primary among these concerns was the potential for online harassment and the associated mental health risks for student participants. To mitigate these risks, the researchers' approach incorporated multiple protective layers and monitoring strategies. Students were exposed to training on digital citizenship and online safety prior to campaign launch as a part of the curriculum. This training included specific guidance on recognizing, documenting, and reporting problematic interactions without engaging with hostile actors. The training also exposed students to

practices such as scheduled breaks from online engagement and guidance on mindful social media use. Additionally, students were encouraged to create campaign–specific professional accounts separate from their personal profiles, establishing a boundary between their academic and personal digital presence. Furthermore, a debriefing session was held after the campaigns closed, which facilitated discussions and opportunities for students to process challenging interactions and share coping strategies. Fortunately, students did not report any problematic interactions.

The literature (see Hrastinski, 2019) indicated ethical considerations concerning the digital divide. For our study, 100% of students reported that they had 24-hour access to a personal electronic device (a smartphone or a laptop). Additionally, students indicated considerable knowledge about the different social media platforms. This eliminated concerns about the digital divide for this class.

Data Collection Strategy

Consistent with established case study methodologies, this research used multiple data collection points to ensure a comprehensive and nuanced understanding of the investigated phenomenon; calling for triangulation of data sources, in-depth exploration of contextual factors, and robust analytical insights to capture the multifaceted nature of the research subject. The study employed a comprehensive multi–method approach to data collection, using three primary qualitative research techniques. To address the first research question (To what extent does social media use in Caribbean higher education align with and support the core principles of PBL?), and the second research question (What insights emerge from integrating PBL with social media in Caribbean higher education?), facilitator observations were systematically documented periodically through detailed field notes and a reflective research journal, capturing real–time interactions and contextual insights throughout the campaign. Notes were also recorded after sessions where students were engaged in message creation, content creation, and social media use and

discussion. Additionally, to respond to the third research question (How do students perceive and experience the incorporation of social media in their learning environment?), a semi–structured focus group interview was conducted to explore students' experiences with social media campaign strategies, allowing for in–depth group discussions and exploration of collective perspectives. The focus group interview was done via the Zoom platform, recorded, and later transcribed. Of the 8 students in the course, 6 were present and participated. They were encouraged to speak freely to give their honest reflections.

Focus Group Protocol Development

The development of the semi–structured focus group interview protocol followed a systematic process to ensure alignment with the research questions while allowing for emergent themes related to social media use in project–based learning (PBL) within Caribbean higher education contexts. Following the recommendations of Krueger & Casey (2015), the protocol was designed to foster an open and dynamic discussion environment while maintaining focus on the research objectives. First, a comprehensive review of relevant literature on social media in education, project–based learning, integrating social media into PBL contexts and Caribbean higher education contexts was conducted. This review identified key constructs and potential discussion themes relevant to the intersection of social media and project–based learning.

To establish trustworthiness at this stage of the project, the researcher aimed to have the protocol reviewed by an expert panel following Morgan's (2019) recommendations. However, after initial contact, only one other expert was available to review the protocol along with the researcher. The researcher was a communication specialist, and the other researcher was a seasoned project–based learning specialist. Their feedback was incorporated to enhance cultural relevance, question clarity, and construct validity. As suggested by Barbour (2018), the protocol was pilot-tested with a small group (n=3) of students from a higher education institution not participating in the main study. The pilot revealed the need for additional probing questions regarding platform–specific experiences and modifications to terminology that better reflected local context and vernacular. See Appendix 1 for a copy of the protocol.

By integrating these multiple data collection methods, the research design aimed to enhance data credibility, provide a comprehensive understanding of the research phenomenon, mitigate potential methodological biases, and capture both individual and collective insights into social media campaign strategies (Creswell & Poth, 2018).

Trustworthiness

The study implemented comprehensive verification strategies to enhance research trustworthiness and credibility. As the primary instructors for the health communication course under investigation, I acknowledge my dual role as both educator and researcher. This positioning provided valuable insider knowledge of curriculum design and pedagogical intent, but simultaneously created potential biases in data collection and interpretation. The dual lecturer–researcher role potentially affected several dimensions of research integrity, such as power differentials that may influence student responses. As Dwyer & Buckle (2009) note, participants may provide responses they believe the researcher/instructor wants to hear, rather than their authentic experiences. To mitigate potential response bias stemming from my instructor status, I employed several strategies including explicitly assuring students that their participation or non–participation would not affect their course grades; and that the focus group primarily occurred after course grades were submitted (Cook–Sather, 2006). It would have been ideal for the focus group to be facilitated by a disinterested researcher, but this was not realized due to time and resource constraints. I also recognize the potential bias toward confirming the effectiveness of the pedagogical approach. To counterbalance this tendency, rigorous reflexivity practices were implemented, including maintaining detailed reflexive journals

documenting author assumptions; engaging an external qualitative methodologist to review the coding framework; and deliberately searching for disconfirming evidence within the data" (Attia & Edge, 2017).

Additionally, an experienced qualitative researcher conducted an independent review of the focus group audio recordings and transcripts, providing critical peer–debriefing to validate the research interpretations. Methodological triangulation was achieved through multiple data sources, including detailed field notes, facilitator observations, journal data, and the focus group transcript, which allowed for cross–validation and reduction of potential single–method biases. To ensure dependability, rigorous documentation of the entire research process was maintained, including transparent coding frameworks and systematic tracking of analytical decisions. The study employed a structured coding process with explicit documentation, encompassing initial open coding, focused selective coding, and theoretical coding frameworks. By integrating these verification strategies, the researcher aimed to enhance the credibility, reliability, and trustworthiness of the findings.

Data Analysis

This study employed thematic analysis, a qualitative research method that allows for systematic identification, analysis, and reporting of patterns (themes) within the collected data (Braun & Clarke, 2006). The analysis process involved a rigorous, iterative method of coding and theme development, focusing on interpreting participants' experiences and perspectives through their narratives and contextual interactions. The focus group recording was transcribed, anonymized, and prepared for analysis. Coding was done manually by the author and verified by an experienced researcher. The verification process checked and confirmed the accuracy, credibility, and trustworthiness of qualitative research findings (Braun & Clarke, 2024).

The research followed a 6–phase approach to thematic analysis:

1. Familiarization with the data through repeated reading and initial note–taking;

2. generating initial codes by systematically identifying meaningful units of text;

3. searching for potential themes by collating coded data into coherent clusters;

4. reviewing and refining themes to ensure they accurately represented the dataset;

5. defining and naming themes to capture their essential characteristics; and

6. producing the report by selecting extract examples, relating the analysis to the research questions, and producing a narrative that describes the data (Braun & Clarke, 2024).

Ethical considerations were maintained throughout the process by ensuring participant confidentiality, obtaining informed consent, and maintaining a reflexive approach to data interpretation, acknowledging the researchers' potential biases and subjective interpretations.

Ethical Considerations

The study adhered to rigorous ethical protocols, beginning with obtaining formal ethical clearance from the university's research ethics committee. At the semester's onset, participants were comprehensively informed about the research study, with all students required to sign an informed consent form which outlined the nature of the research, the data collection strategies, guarantees of confidentiality, privacy, their right to withdraw, and data management strategies. Additionally, a detailed briefing was conducted to clearly explain participants' rights, research procedures, and the full scope of the study. Furthermore, since the focus group was scheduled after the course delivery, students were asked to sign an additional consent form at this stage which outlined their voluntary participation.

Notwithstanding the above, the inherent ethical considerations when conducting research embedded within a university course are acknowledged. These include (but are not limited to) student–instructor power imbalances, where students may feel obligated to participate in the research out of concern about how refusal might affect their grades or standing in the course. Even

with assurances to the contrary, the inherent power differential creates implicit pressure to participate (Saxena et al., 2015). Also, in focus groups specifically, some students may feel pressured to conform to dominant opinions, especially when discussing their experiences with required course activities. As the course progressed and research data continued to be collected, students may have forgotten that they were also research participants or may have wanted to withdraw specific interactions from the research corpus (Saxena et al., 2015). Although these issues did not arise in this study, the possibility is acknowledged. The issue of true voluntary participation can also present in studies of this nature, where data collection was ongoing during routine course delivery. Ensuring that participation is genuinely voluntary when the research is embedded in required coursework activities also presents significant challenges that require careful considerations.

Ways to mitigate some of the above challenges were incorporated in the design including clear, non–penalizing ways for students to opt out of research participation while still fully participating in the course. To minimize the impact on assessment, the data analysis for this project was done after the submission of course grades.

Findings and Discussion

The study's findings reveal promising insights into the integration of social media within PBL environments. The analysis of data was structured to provide a comprehensive understanding of the research phenomenon, presenting perspectives from the primary sources (the facilitator observations and student experiences). The emerging themes examine the findings through the lens of facilitator observations, capturing the qualitative insights and contextual dynamics observed during the project implementation; and through student perspectives, presenting their lived experiences, perceptions, and reflections on using social media within the PBL framework.

Theme 1: Immersive and Dynamic Pedagogy

The first research question inquired into the potential of integrating PBL with social media, seeking to understand the pedagogical dynamics. Through facilitator observations, the study revealed that this approach reshapes both the educational delivery method and the learning environment. The interconnection between technological integration and pedagogical practice allowed usually considered informal communication channels to be reimagined and repurposed to more dynamic, strategic platforms for academic and professional learning. As Larmer (2015) highlighted, project–based learning aims to "offer students the opportunity to design and create solutions to real–life problems", a principle directly embodied in this course's methodology and observed through the project. One journal entry noted:

> **Reflection on RQ1**: I'm observing that social media most strongly aligns with the PBL principles of public product creation and authentic audience engagement. The platforms naturally facilitate sharing work beyond classroom walls — students are receiving comments from community members, creating a real sense of purpose. I'm seeing alignment with the principle of student voice and choice. But I do wonder about the platform algorithms and features and wonder if they drive some content decisions rather than student learning goals.

Unlike traditional classroom applications that limit social media to blogging or passive engagement, this course positioned social media as a primary mechanism for assignment completion and strategic communication skill development. Additionally, there was a comprehensive reimagining of learning interactions with more fluid boundaries between stringent classroom constraints, leading to more interactive, collaborative and digitally-mediated educational experiences. The fusion of PBL and social media created a learning ecosystem that was responsive, adaptive, and deeply reflective of contemporary Caribbean communication landscapes.

The selection of social media as a primary learning tool was particularly strategic within the health communication context. Huo et al. (2019) noted the "changing landscape of the diversity of sources that individuals depend on for health information and news", underscoring the critical importance of digital communication platforms. As they observed, the easy diffusion of messages through social media has fundamentally transformed information dissemination. By integrating social media as a core assignment methodology, the course bridged academic learning with professional practice, preparing students for the complex communication environments they will encounter in their future careers.

The pedagogical approach offered significant advantages beyond traditional learning modalities. The relatively inexpensive nature and ubiquitousness of social media made it an adaptable platform that could be accessed by students from varied backgrounds who might have found more traditional communication channels challenging. The platforms' inherent collaborative features enabled students to simulate real–world organizational communication dynamics, providing an immersive learning experience. It was observed that "students enjoyed collaborating on the assignments", highlighting the engagement and enthusiasm generated by this innovative approach. Additionally, a community approach to addressing health concerns emerged as family members and friends commented on the students' work.

> **Field notes**. An emerging insight is the way social media is revealing regional health communication needs. Students are receiving comments about health concerns specific to Caribbean communities that aren't well–represented in the textbook literature. This is creating a form of community–driven curriculum that extends beyond my original learning objectives — a powerful example of authentic learning.

By reimagining social media as an educational tool rather than as only a communication platform, the course challenged conventional academic boundaries. Students were not just consumers of information but active creators and strategists, designing communication campaigns, observing audience engagement, and developing sophisticated digital communication skills. This approach underscored the necessary involvement of social media as an important aspect of modern strategic communication, transforming digital platforms from recreational tools to real–world professional learning environments.

Theme 2: Successful Project–Based Learning Implementation

This study aimed to understand the integration of social media and project–based learning. Drawing from Larmer's (2015) comprehensive framework for successful project–based PBL, this course demonstrated a rigorous approach to meeting established pedagogical standards. Larmer (2015) identified 6 critical components essential for effective PBL implementation. These are outlined below, along with how the course met these standards:

1. **Challenging Problem or Question.** The course design centered on a complex, real–world health communication challenge that required students to engage deeply with authentic professional scenarios.

2. **Sustained Inquiry.** Students were encouraged to pursue in-depth inves-tigation, moving beyond surface–level exploration to develop comprehensive understanding and sophisticated commu-nication strategies.

3. **Authenticity.** By using social media as a primary communication platform, the course created a direct link between academic learning and professional practice, ensuring real–world relevance.

4. **Student Voice and Choice.** The project methodology empowered students to make critical decisions about their communication approaches, content creation, and strategic messaging.

5. **Reflection, Critique, and Revision.** The course integrated multiple opportunities for students to critically evaluate their work, receive feedback, and iteratively improve their communication strategies.

6. **Public Product.** Social media platforms enabled students to create and share their final projects, transforming academic assignments into publicly accessible communication artifacts.

Field notes. Incorporating social media in the class in this way aligns well with PBL. In the design stage of the course, PBL standards were mapped to ensure we had all the aspects detailed in the literature.

Table 2 provides a detailed mapping of how these PBL standards were operationalized throughout the course, demonstrating a comprehensive and thoughtful approach to project–based learning implementation.

Table 2

Alignment of PBL Standards and the Current Course

PBL Standard	Course Content
Challenging problem	Target a population to address a health issue and create communication messages that address this issue.
Sustained inquiry	Opportunity to work on the product progressively throughout the semester — incorporating research, communication strategies, and other relevant elements.
Authenticity	Real message design assignment addressing a real issue.
Student voice and choice	Students had a choice with their topic, medium, target population, social media platform.
Opportunity for reflection	Oral presentations and collaborative engagement for assignments.
Critique and revision	Peer and facilitator reviews incorporated.
Public product	The message was designed and posted publicly to students' chosen social media platforms.

Reflection on RQ1

After reviewing the complete project cycle, I can more confidently assess how social media aligns with PBL principles in this context.

The strongest alignment appears in:

- Creating public products (social media naturally facilitates sharing)

- Authentic audience engagement (particularly when leveraging existing community networks)

- Reflection (the immediate feedback loop prompts ongoing assessment)

The weakest alignment appears in:

- Student voice and choice (platform constraints can limit expression)
- Sustained inquiry (platform algorithms reward quick content rather than depth)

The sections of weakest alignment provide grounds for future studies to explore how these limitations can be addressed.

The course encountered several nuanced challenges during its implementation. Students articulated mixed feelings about the social media–based assignments, with particular complexity surrounding message development strategies. The class size led to small group configuration (consisting of three students per group) and this prompted reflective discussions about the potential advantages of more expansive collaborative models. Students felt that larger groups may have a role to play by potentially contributing more needed skills to complete the projects.

The facilitator observed that while students grappled with the novel instructional approach, they simultaneously demonstrated remarkable adaptability. Notably, despite these initial reservations and navigational challenges, students ultimately expressed overwhelmingly positive assessments of the learning experience. Statements from the focus group indicated this as outlined below.

> **S1.** I liked using social media in this way because I didn't really think that we could use social media for schoolwork. I have used social media to chat with lecturers and friends about schoolwork but it is the first time that I am using it to actually do an assignment. Love it and I hope I get to do more courses where I can use it.

> **S2.** I enjoyed it because I was able to post about something that really matters to a lot of people. I liked seeing people like our posts and know that the information could help somebody.

The innovative social media integration emerged as a significant catalyst for increased student motivation, suggesting that technological pedagogical approaches that are culturally-specific can effectively transform potential barriers into meaningful learning opportunities.

Theme 3: The Ethics of Social Media Enhanced Education

The integration of social media into academic projects presents complex challenges regarding students' digital identities and online presence. While university students are presumed to have the autonomy to make informed choices about their digital engagement, the study revealed nuanced and potentially problematic intersections between academic and personal digital spaces. Oh et al. (2020) critically highlight the paramount concerns surrounding students' online identities and the potential long–term implications of digital engagement, a perspective vividly illustrated through the study's observations.

During the research period, students created dedicated social media pages for their academic assignments, yet the boundaries between academic and personal digital identities remained remarkably permeable. A particularly revealing instance involved a student who initiated a "TikTok Live" session from her assignment page, simultaneously bridging her academic project and personal digital presence. A social media "live" refers to a livestreaming event where interaction with an audience in real–time occurs (Gilbert, 2019). Livestreaming is one strategic way to drive engagement on social media. Influencers use livestreams to attract new audiences and to maintain their current audiences (Giertz et al., 2021). By revealing her true identity during this synchronous discussion with followers, the student inadvertently collapsed the carefully constructed boundaries between her academic and personal online personas.

This blending of digital identities underscores the subtle yet significant risks associated with social media integration in educational contexts. The seemingly innocuous act of hosting a live discussion represents a broader challenge of maintaining professional boundaries in an increasingly interconnected digital landscape. Students, even when equipped with digital literacy, may not fully comprehend the long–term implications of such seemingly spontaneous digital interactions, potentially exposing themselves to unforeseen personal and professional consequences. The course design

carefully navigated institutional and regulatory frameworks by ensuring adherence to relevant policies and procedures. Considerations such as institutional permissions, and other guidelines on digital engagement such as privacy protections, and ethical sharing of information were meticulously addressed. The approach limited social media's impact on overall grade calculation, maintaining a balanced approach to digital assessment that protected students' academic and personal interests. This is especially critical as research indicates that Caribbean populations are particularly susceptible to digital discrimination, cyber harassment, and data privacy breaches, with limited institutional protections against online violence and identity exploitation (Barrett & Williams-Shakespeare, 2024; Boisselle, 2014; Wilkinson et al., 2024).

The research acknowledges potential risks associated with social media integration, drawing from critical studies on digital communication and student well-being which highlight that potential for students to experience online harassment and bullying (Abaido, 2020; Nuraini et al., 2020). This research indicates the potential for exposing students to these risks such as unwanted attention or presumptive personal connections. Students did not report any harassment or bullying in this study, but were ambivalent on the potential for boundaries to be crossed. For example, one student expressed that:

> I was happy that I did not have to post from my page because in posting about HIV/AIDS, I can just imagine that someone would probably think that I have AIDS and begin to spread it. I do not really care but not posting from my page was good.

Another student expressed the opposite however, proclaiming that:

> I would not have minded posting from my personal page because I know so many people with high blood pressure that I would like them to see my group's message so they will learn. As a matter of fact, I sent some of my messages to my page outside of class so that they could see it. And I got good response from some people.

Even though these responses highlight ambivalence in how students navigate these boundaries, this interaction highlights the sensitive nature of online engagement and emphasizes that these require careful management and support. In a Caribbean context, this is critical due to the region's complex historical experiences of surveillance, marginalization, and digital vulnerability (Montoya et al., 2023; Wilkinson et al., 2024).

Mental health considerations in the literature were a critical area of concern, supported by extensive research from Cunningham et al. (2021) and Ivie et al. (2020) — demonstrating the potential psychological challenges associated with social media use. Additionally, Oh et al. (2020) revealed that despite being digital natives, students often lack familiarity with educational social media use. This finding prompted the course designer to create a robust support system. Extensive out–of–class support, multiple consultation opportunities, a scaffolded learning environment, and flexible communication channels were established to support students' digital learning journey. Understanding these nuanced digital risks is crucial for developing critical digital literacy skills that will empower Caribbean nationals to protect their cultural integrity, personal safety, and technological agency in increasingly interconnected digital environments (Giroux, 2016). This was a main area of concern that prompted the researcher to implement comprehensive supportive strategies and thankfully, no concerns were noted: field notes data showed that the facilitator often engaged students in discussions about mental health. Frequent check–ins with students, open communication channels, provision of counselling service information, and opportunities to express hesitation or seek clarity were integrated into the course design and implementation to ensure student safety.

The course demonstrated that with appropriate support, ethical considerations, and robust institutional frameworks, social media can be a powerful educational tool. While challenges

existed, the overall experience was deemed highly beneficial, with significant potential to enhance student engagement and provide practical learning experiences. The approach balanced technological innovation with student protection, creating a nuanced and supportive learning environment that prioritized student well–being and academic growth.

Theme 4: Student Engagement

The findings reveal an overwhelmingly positive student response to the course, particularly highlighting the transformative potential of interdisciplinary learning. Students expressed profound appreciation for the opportunity to explore creativity beyond their traditional academic boundaries. The elective nature of the course provided a unique space for intellectual exploration, allowing students to engage with new fields of study that extended beyond their primary areas of expertise. One student's reflection powerfully captured the broader implications of this learning experience:

> It was interesting learning something new. It makes me think that when I go out into the job market, I could possibly apply for a job in [a field] that I never thought about. I feel like I have more experience now.

This quotation illustrates the heightened levels of student engagement and the potential for expanded career perspectives that emerged from the course design.

The use of social media as a primary assignment platform emerged as a particularly compelling aspect of the course. Students enthusiastically embraced the departure from traditional project formats, finding the digital approach both liberating and creative. The platform allowed students to tap into their creativity not only in design aspects but also in content creation across social media channels. This approach provided an enjoyable outlet for sharing their work, with students appreciating the opportunity to showcase their projects to family and friends during the campaign period. A notable example emerged from a student who conducted an impromptu TikTok live session, extending far beyond the original course

requirements. The 4–hour session demonstrated students' genuine enthusiasm for their chosen topics, with the student proudly presenting engagement statistics to the class. Her interest in the HIV/AIDS topic illustrated the potential for social media to create meaningful, extended learning experiences.

> **Reflection on RQ3.** Class today was very interesting. Students were divided into their groups and worked together on their messages. Students seemed animated as they discussed various aspects of their projects.

Social media has been recognized as a powerful tool for boosting classroom engagement, with research highlighting how Gen Z students perceive the integration into educational settings as an enjoyable and creative approach (Mendez & Lopez, 2021). During the study, the facilitator observed that students demonstrated a remarkable willingness to submit multiple drafts of their work, seeking extensive feedback before publicly sharing their assignments. When participants were further questioned about this practice during the focus group, they revealed that their awareness of the public audience motivated them to seek more comprehensive feedback than traditionally expected. This is understandable, since research underscores that feedback is a critical mechanism for improving student achievement (Williams, 2024). One student's awareness of the "public eye" was captured in a journal entry:

> **Reflection on RQ3**. I'm also noting how the public nature of these projects is affecting student motivation differently than I expected. While some students are energized by public engagement, others are expressing anxiety about publicly representing health information, mostly expressing the need to have work as "perfect" as possible before it goes out into the "real world".

The students' proactive approach to refining their work suggests a significant level of academic ownership. This engagement has profound implications for learning, potentially fostering deeper understanding, more sophisticated critical thinking skills, and improved content retention. Moreover, their willingness to iterate on their

work not only corroborates existing literature on increased course content engagement but also illuminates promising avenues for enhancing learning outcomes (Alenezi, 2023; Liu et al., 2022; Schnackenberg et al., 2014; Han & Shujun Han, 2022).

Students articulated mixed feelings about their social media–based assignments, with particular complexity surrounding message development strategies. The class size led to small group configuration (consisting of three students per group) and this prompted reflective discussions about the potential advantages of more expansive collaborative models. Students felt that larger groups may have a role to play by potentially contributing more diverse skills and perspectives needed to complete complex projects successfully. However, they also identified that larger groups create significant disadvantages, including higher potential for social loafing behaviors and the stifling of some students' voices during collaborative discussions. Research confirms that smaller groups often lead to greater accountability and less social loafing, as there are fewer people in the group to rely on for work completion, and smaller groups allow more opportunities for group members to contribute to group dialogue ((Vogel & Wood, 2023). Studies demonstrate that while large or medium groups can produce more diverse perspectives, they are particularly susceptible to social loafing, whereas small groups tend to promote individual contributions but can be heavily influenced by group dynamics (Li et al., 2023; Luo et al., 2023; Saqr et al., 2019). Current research reveals that students' competencies, emotional relationships, and collective identities are key determinants of social loafing behavior, with shared responsibility and group conflict being significant factors students identify as contributing to reduced individual effort in larger collaborative settings (Luo et al., 2021; Rajaguru et al., 2020; Liu et al., 2022).

Limitations

Despite the successful integration of project–based learning (PBL) in the course, several significant limitations emerged that warrant critical reflection. The introductory nature of the course created inherent challenges in students' ability to comprehensively evaluate the effectiveness of their health communication interventions. Without extensive prior experience, students struggled to definitively assess the impact of their communication strategies on the target audience.

A critical constraint was the course's pedagogical focus, which prioritized message creation over the technical aspects of multimedia communication design. This approach placed considerable reliance on students' existing skillsets and their capacity to seek external support for design–related challenges. The limited instructional time devoted to multi–media communication design meant that students were essentially required to leverage their prior knowledge or independent learning capabilities to address complex design requirements.

The primary emphasis on message creation, while valuable, inadvertently created a knowledge gap in the comprehensive communication design process. Students were challenged to translate their strategic communication insights into visually compelling and technically proficient multimedia content without direct instructional support for design principles and technical execution. These limitations suggest the need for a more holistic approach to PBL implementation, one that provides more structured support for technical skill development and offers more robust mechanisms for evaluating communication intervention effectiveness. Finally, the research design acknowledged the inherent limitations of qualitative research, including potential researcher bias and the context–specific nature of the findings. While recognizing that the results offer rich, nuanced insights into the studied phenomenon, it is acknowledged that the results cannot be generalized, but instead can provide deep, contextual understanding of the specific research context.

Conclusion

In this class, the use of social media in PBL exemplified how the college classroom can be digitized and provide engagement for students. Social media is growing in use and reach, and bringing some of its more professional features into the classroom allows students to get the real–world experience that PBL demands. Although the course under consideration was a communication course, which may have allowed for more relevant use of social media due to the obvious discipline overlap; college facilitators can explore how these tools can be incorporated into other varied disciplines. Using social media as an outlet for their creativity, students get a chance to merge their interests and worlds, while learning in an engaging and modern way. However, ethical uses should be considered, and more research done to ensure that students are safe as they continue their educational journey.

The findings illuminate the transformative potential of social media as a pedagogical tool that transcends traditional Caribbean educational boundaries. By centering student creativity and authentic communication, this approach embodies the region's rich tradition of adaptive and contextually responsive learning. Caribbean education has long celebrated innovative knowledge transmission, from oral storytelling traditions to community–based learning models, and digital platforms represent a contemporary extension of this pedagogical heritage. Future investigations should explore the integration of social media and project–based learning (PBL) across the diverse disciplinary contexts within the Caribbean, extending beyond the current study's scope. Researchers might profitably examine the differential efficacy of various social media platforms in supporting PBL objectives, identifying which digital environments most effectively facilitate collaborative learning and project development. This involves exploring how digital platforms can be culturally calibrated to reflect the region's diverse linguistic landscapes, interdisciplinary knowledge systems, and collaborative community learning practices. Scholars are encouraged to investigate platform efficacies that align with Caribbean students'

distinctive learning experiences, emphasizing digital literacy that empowers (rather than merely replicates) metropolitan educational models. A particularly promising avenue for scholarly inquiry is the nuanced exploration of audience engagement mechanisms within social media–enhanced PBL practices — a dimension left unexamined in the present research.

By systematically investigating these intersections, scholars can develop more comprehensive understandings of how digital platforms can be strategically leveraged to amplify local voices, facilitate cross–island dialogues, and create meaningful learning ecosystems that reflect the region's dynamic intellectual traditions.

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References

Abaido, G. M. (2020). Cyberbullying on social media platforms among university students in the United Arab Emirates. *International Journal of Adolescence and Youth*, *25*(1), 407–420. https://doi.org/10.1080/02673843.2019.1669059

Adekantari, P., Su'ud, & Sukardi. (2020). The influence of Instagram–assisted project–based learning model on critical thinking skills. *Journal of Educational and Social Research*, *10*(6), 315. https://doi.org/10.36941/jesr–2020–0129

Alenezi, M. (2023). Digital learning and digital institution in higher education. *Education Sciences*, *13*(1). https://doi.org/10.3390/educsci13010088

Almulla, M. A. (2020). The effectiveness of the project–based learning (PBL) approach as a way to engage students in

learning. *Sage Open*, *10*(3), https://doi.org/10.1177/2158244020938702

Asrifan, A., & Dewi, A. (2023). Incorporate social media–movie–based learning Projects (SMMBLPS) into online instruction to engage students in higher education. *International Journal of English Language Studies*, *5*(4), 98–110. https://doi.org/10.32996/ijels.2023.5.4.8

Attia, M., & Edge, J. (2017). Be(com)ing a reflexive researcher: A developmental approach to research methodology. *Open Review of Educational Research*, 4(1), a33–45.

Barbour, R. (2018). *Doing Focus Groups* (2nd ed.). SAGE Publications.

Barclay, C., Donalds, C., & Osei-Bryson, K.-M. (2018). Investigating critical success factors in online learning environments in higher education systems in the Caribbean. *Information Technology for Development*, *24*(3), 582–611. https://doi.org/10.1080/02681102.2018.1476831

Barrett, S. A. M., & Williams-Shakespeare, E. S. (2024). A study of digitalization of higher education institutions in the Caribbean. *Journal of Comparative and International Higher Education*, *16*(2), 117–126.

Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report*, 13(4), 544–559.

Bhatta, T. P. (2018). Case study research, philosophical position and theory building: A methodological discussion. *Dhaulagiri Journal of Sociology and Anthropology,* 12, 72–79. doi:10.3126/dsaj.v12i0.22182.

Boisselle, L. N. (2014). Online-learning and its utility to higher education in the Anglophone Caribbean. *SAGE Open*, *4*(4), 2158244014555118. https://doi.org/10.1177/2158244014555118

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.

Braun, V., & Clarke, V. (2024). Reporting guidelines for qualitative research: a values–based approach. *Qualitative Research in Psychology*, 22(2), 399–438. https://doi.org/10.1080/14780887.2024.2382244

Carr, C. T., & Hayes, R. A. (2015). Social media: Defining, developing, and divining. *Atlantic Journal of Communication*, *23*(1), 46–65. https://doi.org/10.1080/15456870.2015.972282

Chasokela, D. (2025). Role of technology integration in the development of 21st–century skills STEM university in Zimbabwe. *Journal of Research in Education and Pedagogy*, 2(1), 124–135. https://doi.org/10.70232/jrep.v2i1.36

Cook–Sather, A. (2006). Sound, presence, and power: "Student voice" in educational research and reform. *Curriculum Inquiry*, 36(4), 359–390.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (4th ed.). SAGE Publications.

Cunningham, S., Hudson, C., & Harkness, K. (2021). Social media and depression symptoms: a meta–analysis. *Res Child Adolescent Psychopathology*, *49*, 241–253.

Dhanwal, S. (2023). Purpose and extent of use of social media by students. *Gujarat Journal of Extension Education*, *35*(2), 115–121. https://doi.org/10.56572/gjoee.2023.35.2.0023

Dwyer, S. C., & Buckle, J. L. (2009). The space between: On being an insider–outsider in qualitative research. *International Journal of Qualitative Methods*, *8*(1), 54–63.

Flyvbjerg, B. (2006). Five misunderstandings about case–study research. *Qualitative Inquiry*, *12*(2), 219–245

Giertz, J. N., Weiger, W. H., Törhönen, M., & Hamari, J. (2021). Content versus community focus in live streaming services: How to drive engagement in synchronous social media. *Journal of Service Management*, *33*(1), 33–58. https://doi.org/10.1108/JOSM–12–2020–0439

Gilbert, M. A. (2019). Strengthening Your Social Media Marketing with Live Streaming Video. In: Al–Masri, A., Curran, K. (Eds.) *Smart Technologies and Innovation for a Sustainable Future. Advances in Science, Technology & Innovation.* Springer, Cham. https://doi.org/10.1007/978–3–030–01659–3_42

Giroux, H. A. (2016). *Pedagogy of Resistance: Against Neoliberal Capitalism*. Routledge. https://doi.org/10.3390/educsci14010036

Greaves, D. (2024). Perception of young adults in higher education: A case study of Caribbean students in the online learning environment. *Open Learning: The Journal of Open, Distance and e-Learning*, *39*(1), 68–84. https://doi.org/10.1080/02680513.2021.1906640

Guillén-Gámez, F. D., Gómez-García, M., & Ruiz-Palmero, J. (2024). Digital collaboration in higher education: A study of digital skills and collaborative attitudes in students from diverse universities. *Education Sciences*, *14*(1), 36.

Gutiérrez–Ujaque, D. (2024). Towards a critical digital literacy and consciousness in higher education: the emancipatory role of critical digital pedagogy. *Pedagogies: An International Journal*, *19*(3), 337–371. https://doi.org/10.1080/1554480X.2024.2379787

Han, S. (2022). Flipped classroom: Challenges and benefits of using social media in English language teaching and learning. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.996294

Hrastinski, S. (2019). What do we mean by blended learning? *Tech Trends*, *63*(5), 564–569. https://doi.org/10/1007/s11528–019–00375–5

Huo, J., Desai, R., Hong, Y., Turner, K., Mainous, A., & Bian, J. (2019). Use of social media in health communication: Findings from the Health Information National Trends Survey 2013, 2014, and 2017. *Cancer Control*, *26*(1). doi:10.1177/1073274819841442

Ivie, E. J., Pettitt A., Moses, L. J., & Allen N. B. (2020). A meta–analysis of the association between adolescent social media use and depressive symptoms. *Journal of Affective Disorders*, *275*, 165–174.

Jewpanich, C., & Piriyasurawong, P. (2015). Project–based learning using discussion and lesson–learned methods via a social media model for enhancing problem solving skills. *International Education Studies*, *8*(6), 24–31. https://eric.ed.gov/?id=EJ1067769

Khan, T. M. (2021). Use of social media and WhatsApp to conduct teaching activities during the Covid–19 lockdown in Pakistan. *International Journal of Pharmacy Practice*, *29*(1), 90. https://doi.org/10.1111/ijpp.12659

Kokotsaki, D., Menzies, V., & Wiggins, A. (2016). Project–based learning: A review of the literature. *Improving Schools*, *19*(3), 267–277. https://doi.org/10.1177/1365480216659733

Kratochwill, T. R., Hitchcock, J. H., Horner, R. H., Levin, J. R., Odom, S. L., Rindskopf, D. M., & Shadish, W. R. (2012). Single–Case intervention research design standards. *Remedial and Special Education*, 34(1), 26–38. https://doi.org/10.1177/0741932512452794

Krueger, R. A., & Casey, M. A. (2015). *Focus groups: A Practical Guide for Applied Research (5th ed.).* SAGE Publications.

Larmer, J. (2015, April 21). Gold Standard PBL: Project based teaching practices. PBL Works. https://www.pblworks.org/blog/gold-standard-pbl-project-based-teaching-practices

Larmer, J., Mergendoller, J., & Boss, S. (2015). Setting the standard for project-based learning. Alexandria, VA: ASCD.

Lasauskiene, J., & Rauduvaite, A. (2015). Project–based learning at university: Teaching experiences of lecturers. *Procedia – Social and Behavioral Sciences*, *197*, 788–792. https://doi.org/10.1016/j.sbspro.2015.07.182

Li, M., Zhang, Y., & Wang, X. (2023). Dyads or quads? Impact of group size and learning context on collaborative learning. *Frontiers in Psychology*, *14*, 1168208. https://doi.org/10.3389/fpsyg.2023.1168208

Liu, S., Zaigham, G. H. K., Rashid, R. M., & Bilal, A. (2022). Social media-based collaborative learning effects on student performance/learner performance with moderating role of academic self-efficacy. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.903919

Lubis, N., Lubis, A., & Purba, N. B. (2020). Project–based learning collaborated with digital media for Indonesian EFL learners' self–confidence and communication skill. *Journal Pendidikan Dan Pembelajaran Terpadu, 2*(1), Article 1. https://doi.org/10.32696/pgsd.v2i1.440

Luo, H., Chen, Y., Chen, T., Koszalka, T. A., & Feng, Q. (2023). Impact of role assignment and group size on asynchronous online discussion: An experimental study. *Computers & Education*, *192*, 104658. https://doi.org/10.1016/j.compedu.2022.104658

Luo, Z., Marnburg, E., Øgaard, T., & Okumus, F. (2021). Exploring antecedents of social loafing in students' group work: A mixed-methods approach. *Journal of Hospitality, Leisure, Sport & Tourism Education*, *28*, 100314. https://doi.org/10.1016/j.jhlste.2021.100314

Maringe, F. (2017). Creating opportunities for a socially just pedagogy: The imperatives of transformation in post–colonial HE spaces. In R. Osman & D. J. Hornsby (Eds.), *Transforming Teaching and Learning in Higher Education: Towards a Socially Just Pedagogy in a Global Context* (pp. 59–78). Springer International Publishing. https://doi.org/10.1007/978–3–319–46176–2_4

Mendez, E. A., & Lopez, M. (2021). Class engagement using social media. *Proceedings of the International Conference on Education*, *7*(1), Article 1. https://doi.org/10.17501/24246700.2021.7134

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative Research: A Guide to Design and Implementation* (4th ed.). Jossey–Bass.

Morgan, D. L. (2019). *Basic and Advanced Focus Groups*. SAGE Publications.

Montoya, M. L. G., Muente, A., & Valdez, E. (2023). Building scenarios for the future of digital identification systems in Latin America and the Caribbean. *IDB Publications*. https://doi.org/10.18235/0004729

Moodle. (2022, July 14). *About Moodle*. Retrieved July 23, 2025, from https://docs.moodle.org/400/en/About_Moodle

Nadeak, B. (2020). The effectiveness of distance learning using social media during the pandemic period of Covid–19: A Case in Universitas Kristen Indonesia. *International Journal of Advanced Science and Technology*, *29*(7), Article 7. http://sersc.org/journals/index.php/ijast

Nuraini, N. L. S., Cholifah, P. S., Putra, A. P., Surahman, E., Gunawan, I., Dimas, A. D., & Prastiawan, A. (2020). Social media in the classroom: A literature review. *International Conference on Emerging Technologies*, 264–269. https://doi.org/10.2991/assehr.k.201204.050_

Oh, J. E., Chan, Y. K., & Kim, K. V. (2020). Social media and e–portfolios: Impacting design students' motivation through project–based learning. *IAFOR Journal of Education*, *8*(3), 41–58. https://doi.org/10.22492/ije.8.3.03

Palsodkar, P., Dubey, Y., Palsodkar, P., & Bajaj, P. (2023). Project–based pedagogical inevitability and social media impact. *International Journal of Technology Enhanced Learning*, *15*(4), 346–363. https://doi.org/10.1504/IJTEL.2023.133772

Patton, M. Q. (2015). *Qualitative Research & Evaluation Methods: Integrating Theory and Practice* (4th ed.). SAGE Publications.

Rafiq, D. S., Iqbal, S., & Afzal, D. A. (2024). The impact of digital tools and online learning platforms on higher education learning outcomes. *Al-Mahdi Research Journal (MRJ)*, *5*(4), Article 4.

Rajaguru, R., Narendran, R., & Rajesh, G. (2020). Social loafing in group-based learning: Student-created and instructor-created group perspectives. *Education and Training*, *62*(4), 437-451. https://doi.org/10.1108/ET-01-2019-0018

Rice, M., & Shannon, L.-J. Y. (2016). Developing project–based learning, integrated courses from two different colleges at an institution of higher education: An overview of the processes, challenges, and lessons learned. *Information Systems Education Journal*, *14*(3), 55. https://isedj.org/2016–14/n3/ISEDJv14n3p55.html

Rosiyanah, S., Wijayati, N., & Masturi, M. (2019). Students critical thinking skills in project–based learning assisted by Edmodo social networking site. *Journal of Innovative Science Education*, *8*(3), Article 3. https://doi.org/10.15294/jise.v8i1.29906.

Safapour, E., Kermanshachi, S., & Taneja, P. (2019). A review of nontraditional teaching methods: Flipped classroom, gamification, case study, self–learning, and social media. *Education Sciences*, *9*(4), 273. https://doi.org/10.3390/educsci9040273_

Samuel, A. (2024). Decolonizing online learning: a reflective approach to equitable pedagogies. *Distance Education*, *45*(3), 439–445. https://doi.org/10.1080/01587919.2024.2338720

Saqr, M., Fors, U., & Tedre, M. (2019). How the study of online collaborative learning can guide teachers and predict students' performance in a medical course. *BMC Medical Education*, *19*(1), 24. https://doi.org/10.1186/s12909-019-1446-1

Sato, S., Kageto, M., & Kirkpatrick, G. (2013). Analysis of informal use of social media in formal project–based learning. *International Journal for Educational Media and Technology*, *7*(1). https://ijemt.org/index.php/journal/article/view/113

Saxena, D., Singhal, D., & Patel, M. (2015). Comment on student–teacher research: A dilemma between power, ethics, and morality. *Indian Journal of Ophthalmology*, *63*(1), 76. https://doi.org/10.4103/0301–4738.151485

Schnackenberg, H. L., Edwin, S., Vega, E. S., & Simard, D. A. (2014). Paradigm shift: Introduction of a social media network and Web 2.0 technology into a college classroom environment. *Journal of Cases on Information Technology*, *16*(2), 1–12. https://doi.org/10.4018/jcit.2014040101

Stake, R. E. (2005). Qualitative case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *The SAGE Handbook of Qualitative Research* (3rd ed., pp. 443–466). SAGE Publications.

Suebsom, K. (2020). The use of blended learning: Social media and flipped classroom to encourage thinking skills and collaborate work in higher education. *International Conferences on Computers in Management and Business*, 201–206. https://doi.org/10.1145/3383845.3383883

Taylor, N., Valencia–García, L. D., VandenBroek, A., Stinnett, A., & Allen, A. (2023). Ethics and images in social media research. *First Monday*, *28*(4). https://doi.org/10.5210/fm.v28i4.12680.

Tung, T. M., Lan, D. H., Cuc, T. T. K., Oanh, V. T. K., & Ngoc, N. B. (2024). Social media in the classroom: Practical strategies for fostering collaborative learning and inspiration. *Journal of Electrical Systems*, *20*(3s), 1487-1507. https://doi.org/10.52783/jes.1524

Van den Beemt, A., Thurlings, M., & Willems, M. C. (2020). Towards an understanding of social media use in the classroom: A literature review. *Technology, Pedagogy and Education*, *29*(1), 35–55. https://doi.org/10.1080/1475939x.2019.1695657

Veldthuis, M., Alers, H., Malinowska, A., and Peng, X. (2020). Flipped classrooms for remote teaching during the Covid–19 pandemic. *ACM Int. Conf. Proc. Ser.* 16, 1–20. doi: 10.1145/3442481.3442512

Vogel, N., & Wood, E. (2023). Collaborative group work: University students' perceptions and experiences before and during COVID-19. *SN Social Sciences*, *3*(6), 86. https://doi.org/10.1007/s43545-023-00670-2

Wang, Z., Abdullah, Z., & Hu, W. (2025). A systematic review of the impact of social media on project-based learning. *Sustainability*, *17*(8), Article 8. https://doi.org/10.3390/su17083680

Watson, E. (2020). *#Education: The Potential Impact of Social Media and Hashtag Ideology on the Classroom*. *5*(2), 40–56. https://doi.org/10.46303/ressat.05.02.3

Wen, X., & Piao, M. (2020). Motivational profiles and learning experience across Chinese language proficiency levels. *System* (90), 102216–102116. doi:10.1016/j.system.2020.102216.

Wilkinson, D., Hanley, E., & Knijnenburg, B. P. (2024). A comparative analysis of legislative protections for online safety in the global south: A Case study of the Caribbean. *Proc. ACM Hum.-Comput. Interact.*, *8*(CSCW2), 362:1–362:29. https://doi.org/10.1145/3686901

Williams, A. (2024). Delivering effective student feedback in higher education: An evaluation of the challenges and best practice. *International Journal of Research in Education and Science (IJRES)*, *10*(2), 473-501. https://doi.org/10.46328/ijres.3404

Wright, C., Ritter, L. J., & Wisse Gonzales, C. (2022). Cultivating a collaborative culture for ensuring sustainable development goals in higher education: An integrative case study. *Sustainability*, *14*(3), 1273. https://doi.org/10.3390/su14031273

Wurdinger, S., & Qureshi, M. (2015). Enhancing college students' life skills through project based learning. *Innovative Higher Education*, *40*(3), 279–286. https://doi.org/10.1007/s10755–014–9314–3

Xiao, J. (2023). Digital transformation in top Chinese universities: An analysis of their 14th five–year development plans (2021–2025). *Asian Journal of Distance Education*, 18(2), 186–201. Retrieved from https://asianjde.com/ojs/index.php/AsianJDE/article/view/757

Yin, R. (2014). *Case Study Research: Design and Methods* (5th ed.)Sage.

Yin, R. K. (2018). *Case study research and applications: Design and Methods* (6th ed.). Sage.

Zhang, Y., & Watson, S. L. (2025). Impacts of gamified project–based learning on students' achievement motivation in rural China. *Tech Trends.* https://doi.org/10.1007/s11528–025–01051–7

Appendix 1

Using Social Media to Enhance Project–based Learning in Caribbean Higher Education: A Case Study

Research Questions:

1. To what extent does social media use in Caribbean higher education align with and support the core principles of project–based learning?

2. What insights emerge from integrating project–based learning with social media in Caribbean higher education?

3. How do students perceive and experience the incorporation of social media in their learning environment?

Introduction and Ground Rules (5–10 minutes)

Facilitator Script:

Good day everyone and thank you for agreeing to participate in this focus group discussion. As you were informed, you do not have to participate in this study even though you were in my class. This aspect is totally voluntary and even now, if you want to leave, you are free to do so without any consequence to you. So, is everyone consenting to being here? (Give time to answer). Thank you for submitting the consent form earlier. I appreciate that. I will be guiding our conversation today and the purpose of this discussion is to explore your experiences using social media as part of your campaign activities in our class.

Before we begin, I'd like to review a few ground rules:

- There are no right or wrong answers; we're interested in your honest opinions and experiences.
- Everyone's perspective is valuable. Please feel free to share your views even if they differ from what others have said.
- We ask that only one person speaks at a time.
- Everything shared here remains confidential. While I will be recording this session for research purposes, your identities will be kept confidential in any reports or publications.
- Please silence your mobile phones, though you may keep them with you.
- This session will last approximately 45 minutes.

Does anyone have any questions before we begin?

[Address any questions]

I'll now start the recording and we can begin our discussion.

Questions

1. Let's start by going around the room. Could you please briefly describe your typical use of social media platforms in your daily life?

    a. How has your use of social media changed since entering this class?

2. Which specific features or capabilities of social media platforms have been most useful for your health communication project work?

    a. *Probe:* How did these features support research, collaboration, content creation, or information sharing?

3. You were asked to create social media handles specifically for the campaigns, could you describe how you feel about this.

    a. *Probe:* Do you think your experience would be different if you had posted from your own hands/page?

    b. *Probe:* What would be your recommendation for going forward? Should students post from a group page or their own pages?

4. How has the integration of social media in your projects influenced your approach to:

    a. *Probe:* Researching health information?

    b. *Probe:* Creating health communication materials?

    c. *Probe:* Considering audience needs and perspectives?

    d. *Probe:* Understanding cultural contexts in health communication?

5. Did you experience any negative type of interaction online during the campaigns?

    a. *Probe:* If yes, please explain.

6. Explain your thoughts on whether social media should continue to be used in higher education/ university settings.

    a. *Probe:* Are there any cultural factors that you think we should consider when asking students to share their work online?

7. How does social media help us in general to address health communication issues relevant to Caribbean populations?

    a. *Probe:* Can you provide examples?

8. How has using social media in your health communication projects affected your:

    a. *Probe:* Motivation and engagement with the course material?

    b. *Probe:* Development of professional skills?

9. What challenges have you experienced when using social media for your health communication projects?

    a. *Probe:* How have you addressed these challenges?

    b. *Probe:* What support would have been helpful?

10. How has the integration of social media in your health communication projects influenced your view of:

    a. *Probe:* The role of social media in health communication practice?

    b. *Probe:* Health information dissemination in the Caribbean?

11. Based on your experience, what recommendations would you give to instructors about integrating social media into projects in the future?

12. **Closing Question:** Is there anything else about your experience with social media in your health communication projects that you would like to share that we haven't covered?

Facilitator Closing Script:

Thank you all for your participation and valuable insights today. Your experiences and perspectives will help us better understand how social media can be effectively integrated into project–based learning in health communication education in the Caribbean context. As a reminder, your contributions will remain confidential. If you have any questions or additional thoughts after today, please feel free to contact me via the information provided in your consent form. Thank you again for your time.

Post–Focus Group Procedures:

1. Review key points and initial impressions

2. Document any methodological observations or contextual factors

3. Secure recordings and notes according to data protection protocols

4. Schedule transcription and initial coding

5. Send thank–you messages to participants

Materials Needed:

- Note–taking materials
- Facilitator guide (this document)