



Integration of Facebook Messenger in Coordinating Aviation Student Activities

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Abstract

This study evaluated the integration of Facebook Messenger as a communication and coordination tool among aviation students at Indiana Aerospace University for the 2024–2025 academic year. Facebook Messenger, widely used in the Philippines, offers real-time communication, file sharing, and accessibility across devices, which makes it a potentially effective platform for academic coordination. The study was conducted in June 2025 and utilized a mixed-methods approach involving 100 aviation students from the BSAT course through surveys and open-ended responses. Surveys employed a 4-point Likert scale to assess the integration of Messenger, Flight scheduling, and the dissemination of aviation information. Results indicated that Messenger is heavily utilized for student coordination, particularly for sharing real-time updates and information. However, students encountered challenges, including delayed responses, file size limitations, off-topic discussions, and internet connectivity issues. To culminate the study, the researchers proposed an action plan, conducted digital literacy sessions, shared findings online, and recommended the integration of supplemental tools to enhance Messenger's effectiveness in aviation education

Keywords: *messenger integration, flight scheduling, dissemination of aviation information*

Introduction

With the expansion of digital connectivity, communication platforms have significantly reshaped how people interact, collaborate, and exchange information. A recent study by Krejins et al. (2023) utilized the Social Presence Framework, which explores the psychological phenomenon wherein other individuals are perceived as physical 'real' persons in technology-mediated communication. Social media has become an integral part of educational and professional communication. Among other platforms, Facebook Messenger stands out as one of the most influential messaging platforms of the decade.

Facebook Messenger is a free-to-use instant messaging platform developed by Meta Platforms, Inc., that enables users to exchange text, multimedia messages, voice, and video calls. It also offers other features, such as group chats, interactive media, end-to-end encryption, and business-based integrations, which make it a versatile tool for both personal and academic settings.

Beasley et al. (2020) elaborate on Facebook's significance in shaping communication dynamics within educational and social contexts in the United States of America. It included the platform's impact on social interactions, particularly within American society. Furthermore, a study conducted by Cruz and Waemusa (2023) was based in Thailand and examined how English as a Foreign Language (EFL) learners engaged in Facebook Messenger group chats during an online English conversation course. Their findings showcased high levels of interactive communication, demonstrating Messenger's effectiveness in collaborative sessions.

According to Statista (2024), Facebook was the most widely used social media platform in the Philippines as of the third quarter of 2024, reported by approximately 95% of respondents. Approximately 93% of Filipinos reported using the Messenger app. A study by Pedroso et al. (2022) revealed that students perceive Messenger as an effective platform for academic inquiries, citing its ease of use, accessibility, and ability to facilitate collaboration and task management in the Philippines. The platform's features were deemed instrumental in enhancing student engagement and learning outcomes. Taking this into account, a study done by Toring et al. (2023) evaluated student satisfaction with a Learning Management System Framework at Indiana Aerospace University. It highlighted the importance of effective virtual tools during the COVID-19 Pandemic.

The aviation curriculum is renowned for its rigorous nature, requiring students to balance technical coursework, simulation sessions, and practical activities. Effective communication and timely coordination are crucial in managing this demanding environment. A study facilitated by Tadrous (2024) underscores the effectiveness of two-way, interactive communication in building relationships and trust between the aviation sector and its audience. By fostering interactive and timely communication, Messenger can serve as an effective tool in enhancing the educational experience for aviation students.

Aviation students primarily face scheduling and communication challenges, and while Messenger offers real-time convenience, doubts persist about its effectiveness in organized academic settings. Sweeney (2024) conducted a qualitative study examining undergraduate students' experiences with educational technology on Facebook Messenger within a university setting. The study identified students who are hesitant about using social media for academic coordination due to its blurred boundaries regarding personal and academic coordination, discomfort with mixed-use platforms, and distrust in peer-led study groups. In addition to the potential risks of application crashes and security threats posed by scammers or hackers, many students still express a strong preference for face-to-face communication.

A study by DuPont et al., (2022) aligns with principles from the Student-Centered Learning Theory, which emphasizes the importance of considering students' needs and preferences in the design and delivery of educational programs. By adopting platforms like Facebook Messenger, administrators can facilitate more flexible and responsive scheduling practices that align with the student-centered approach, thereby enhancing coordination and communication among aviation students. Additionally, a study by Alonzo and Oo (2023) employs the Activity Theory to analyze the integration of Facebook Messenger in collaborative academic work. It highlighted how Messenger's features facilitate dynamic collaboration and focused discussions, compared to traditional communication methods such as email. On the other hand, a case study from Destacamento et al. (2024) focused on CRM and team-building in the aviation technology program. It emphasized clear communication channels and the timely sharing of information. The study overstated that effective communication strategies are crucial for ensuring that students receive updates and/or relevant information about aviation activities.

The purpose of this study was to evaluate the integration of Facebook Messenger in coordinating student activities involving aviation students. By focusing on aviation students, who require a high level of coordination, the research provides insights into how Facebook Messenger can be leveraged to meet specific needs, particularly in areas such as flight scheduling and the dissemination of aviation information. Understanding the platform's limitations—such as distractions, security concerns, and a preference for face-to-face interactions—allows instructors to adopt a balanced approach to utilizing it more effectively.

The researchers, comprising students from the Aviation Technology and Aircraft Maintenance Technology programs at Indiana Aerospace University, possessed the competence to conduct the study "Integration of Facebook Messenger in Coordination Aviation Student Activities." Their combined expertise and background in aviation operations and technical maintenance provide them with a practical understanding of communication challenges in academic and training environments. Fundamentally, the goal of this study was to evaluate the advantages and disadvantages of the platform as a communication medium in the aviation industry context.

Research Question/ Objectives

The main purpose of the study was to evaluate the integration of Facebook Messenger as a tool for coordinating aviation-related student activities at Indiana Aerospace University for the A.Y. 2024-2025 and to propose an action plan. The study answered the following sub-problems:

1. Identify the profile of the respondents in terms of year level.
2. Determine the integration and role of Messenger in aviation student activity coordination.
 - 2.1. messenger integration;
 - 2.2. flight scheduling; and
 - 2.3. dissemination of aviation information?
3. Rank the problems encountered by the Aviation Technology students.

Methodology

Research Design

This study employed a mixed-methods approach, integrating both qualitative and quantitative methods to comprehensively analyze the integration of Facebook Messenger in coordinating aviation student activities at Indiana Aerospace University. This methodological strategy is particularly useful in addressing complex issues that require diverse types of evidence for a comprehensive understanding.

The research employed a simple random sampling process and administered an open-ended questionnaire to gather qualitative data on students' experiences and the specific applications of Facebook Messenger in their activities. Concurrently, numerical data were collected via Google Forms surveys and face-to-face surveys, utilizing a four-point Likert scale. This approach was designed to essentially sustain a formulated result of Facebook Messenger's integration and applicability within the aviation sector.

Participants/Respondents

The respondents for this study consisted of one hundred (100) aviation students from Indiana Aerospace University. Using a simple random sampling technique, the research ensured each student in the defined population had an equal chance of being selected.

Participants came from the aviation sector of IAU, with their engagement in aviation activities and use of Messenger for coordinating schedules and communications in mind. The selection also considered academic levels and organizational involvement to understand the impact of the platform. The researchers obtained informed consent before data collection. To ensure the privacy of the participants, all data were handled confidentially, as their identities were classified.

Instrument

A survey served as the primary research instrument and was distributed both digitally and in paper format to Indiana Aerospace University aviation students. In addition to multiple-choice and open-ended questions, the survey also includes a Four-Point Likert Scale (4 = Always, 3 = Often, 2 = Sometimes, and 1 = Never). For a fair and balanced figure, a simple random sampling procedure was employed, ensuring that every person in the population has an equal and independent chance of being selected. All participants had received sufficient knowledge about their rights and how their answers would be treated in terms of security, strictly in accordance with ethical standards, prior to data collection. The collected responses were then analyzed to identify patterns in communication preferences and challenges among aviation students.

Procedure

Researchers used a Simple Random Sampling process to select 100 Bachelor of Science in Aviation Technology students from Indiana Aerospace University. Three experts validated the instruments, and each student was informed about the study's purpose and procedures. A self-made survey questionnaire was used to collect data on student experiences. The questionnaire consisted of year-level responses, a quantitative assessment of Facebook Messenger's integration using Likert scale questions, and in-depth qualitative insights gathered through open-ended questions. Data was treated with confidentiality and anonymity in accordance with RA 10173.

Data Analysis

The Statistical Treatment of Data used four (4) four-point Likert Scale with numerical range, descriptive equivalent, and interpretation in conducting a Quantitative study analysis of determining the integration and role of Facebook Messenger in the coordination of BSAT students of IAU. Furthermore, the researchers used the weighted mean, ranking, and simple rate.

Ethical Considerations

The Aviation Student Program Department adheres to ethical guidelines, prioritizing openness, respect for participants, and data protection. Participants are thoroughly informed about the study's goals, methods, and potential dangers in a questionnaire. Signed informed consent papers outline their rights and parameters, ensuring voluntary participation. Participants have the freedom to leave at any time without consequences to their academic record or university relationship. Personal data is anonymized and stored in Google Forms, adhering to the Data Privacy Act of 2012. The survey is non-intrusive to minimize stress and provide resources for emotional distress. The research team is committed to presenting findings accurately, disclosing any biases, limitations, or conflicts of interest. These strict ethical guidelines foster trust, integrity, and respect, aiming to enhance the engagement, cooperation, and communication of aviation students.

Results and Discussion

Respondents Profile

This figure illustrates the distribution of respondents based on their year level at Indiana Aerospace University. The majority of participants were second-year aviation students, comprising 38% of the total sample. Third-year students followed this at 30%, while fourth-year students accounted for 17%. Lastly, first-year students represented 15% of the total 100 respondents, making up the complete population surveyed.

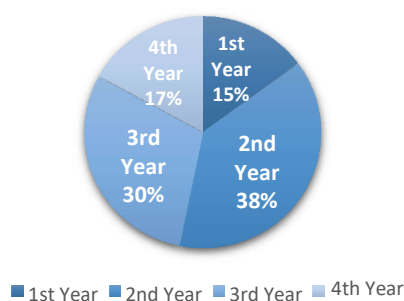


Figure 1. 100%

Messenger Integration

Messenger integration in the study refers to the use of Facebook Messenger as a centralized platform for streamlined communication among aviation students. It enables real-time updates, group discussions, and improves the planning and management of student activities. This integration enhances engagement, efficiency, and accessibility by leveraging a familiar messaging tool for coordinating

aviation student activities.

Table 1 shows the extent of messenger integration among aviation students in terms of communication, accessibility, and coordination of academic-related tasks.

Table 1. Messenger Integration

<i>Indicators</i>	<i>Weighted Mean</i>	<i>Description</i>
I use Messenger regularly to communicate with classmates about aviation tasks.	3.75	Always (A)
Messenger Integration enables me to communicate with users in real time.	3.74	Always (A)
Messenger Integration allows me to access text messages across multiple devices seamlessly.	3.69	Always (A)
I am able to access relevant files, links, and media directly within the Messenger interface.	3.61	Always (A)
I find Facebook Messenger effective for coordinating aviation-related student activities.	3.59	Always (A)
Average Weighted Mean	3.67	Always (A)

Legend: 3.51-4.00 = Always (A), 2.51-3.50 = Often (O), 1.51-2.50 = Sometimes (S), 1.0-1.50 = Never (N)

Flight Scheduling

Flight scheduling in the study refers to the organized planning and allocation of flight training sessions for aviation students. It ensures efficient use of resources such as aircraft, instructors, and time slots. By implementing a structured scheduling system, students experience reduced conflicts and improved time management. This approach helps enhance training consistency, minimize delays, and support the overall progress of aviation students.

Table 2 presents the integration of Facebook Messenger among aviation students in terms of flight scheduling.

Table 2. Flight Scheduling

<i>Indicators</i>	<i>Weighted Mean</i>	<i>Description</i>
Group chats on Facebook Messenger are used for coordinating flight schedules with classmates and instructors.	3.52	Always (A)
My flight instructors send reminders and updates via Facebook Messenger.	3.50	Always (A)
I regularly review my training hours and lesson logs to ensure I'm meeting the required flight time for certification.	3.36	Often (O)
I can quickly provide feedback on scheduling conflicts or preferences, aiding instructors in optimizing future schedules.	3.34	Often (O)
I rely on Facebook Messenger as my main tool for coordinating flight schedules.	3.26	Often (O)
Average Weighted Mean	3.39	Often (O)

Legend: 3.51-4.00 = Always (A), 2.51-3.50 = Often (O), 1.51-2.50 = Sometimes (S), 1.0-1.50 = Never (N)

Dissemination Of Aviation Information

The dissemination of aviation information, including student activities, CAAP announcements, academic directives, and safety protocols, is crucial for operational efficiency, reducing miscommunication, and promoting academic engagement. Effective dissemination involves delivering the right information to the right individuals at the right time in a format that ensures clarity and prompts action. Digital platforms such as Facebook Messenger enhance communication effectiveness in educational settings.

Table 3 presents the integration of Facebook Messenger among aviation students in terms of disseminating aviation related information.

Table 3. Dissemination Of Aviation Information

<i>Indicators</i>	<i>Weighted Mean</i>	<i>Description</i>
I receive aviation-related announcements through Facebook Messenger in real-time.	3.55	Always (A)
I receive timely updates about aviation student activities via Facebook Messenger.	3.48	Often (O)
I use Facebook Messenger as my primary source for coordinating and staying informed about aviation student activities.	3.46	Often (O)
I prefer receiving aviation updates through Facebook Messenger rather than other platforms (e.g., email, bulletin boards).	3.38	Often (O)
I find it easy to locate important information about aviation student activities within our Facebook Messenger chats.	3.38	Often (O)
Average Weighted Mean	3.45	Often (O)

Legend: 3.51-4.00 = Always (A), 2.51-3.50 = Often (O), 1.51-2.50 = Sometimes (S), 1.0-1.50 = Never (N)

Problems Encountered

While Facebook Messenger has proven to be a convenient and widely accessible platform for communication among aviation students,

its integration in academic coordination is not without challenges. Based on the study's findings, several problems were consistently reported by the respondents, which affected the platform's overall effectiveness in facilitating streamlined communication and coordination.

The problems encountered during the integration of Facebook Messenger include concerns over responsiveness, large file sizes, internet-related issues, unrelated conversations, overwhelming notifications, and the coordination of files and media.

Table 4 lists the problems encountered during the Integration of Facebook Messenger in Coordinating Aviation Student Activities.

Table 4. *Problems Encountered*

<i>Indicators</i>	<i>Frequency</i>	<i>Rank</i>
I often have to follow up with members who don't respond in group chats.	61	1
I encounter difficulties when trying to share/open certain files (eg. large PDF's or videos)	49	2
I face internet-related issues that affect real-time communication on Messenger.	48	3
I often find myself sidetracked by unrelated conversations instead of focusing on critical aviation details.	46	4
I spend too much time trying to search for specific messages or information in Messenger group chats due to inconsistent connection.	40	5
I find it difficult to keep track of files and/or media sent in group chat/s.	34	6
I feel overwhelmed by the number of notifications during academic coordination	31	7
I face problems using Messenger on certain devices while coordinating academic-related tasks.	29	8
I experience delays in coordination because not everyone uses Messenger.	27	9
I avoid sharing academic files through Messenger due to security concerns (eg. Hacking)	22	10

The most significant problem is the need for frequent follow-ups with group members who fail to respond in Messenger group chats. With a frequency of 61, the lack of timely responses hinders the smooth flow of communication and often delays group decision-making and activity planning.

The second most reported issue, with a frequency of 49, involves difficulties in sharing or opening large files, such as PDF documents or video materials.

Internet-related issues ranked third, with 48 respondents citing them. These technical challenges disrupt real-time communication, which is crucial in aviation-related coordination.

Fourth on the list is the tendency for conversations to drift toward unrelated topics within group chats, noted by 46 participants. Distractions make it harder for students to focus.

The fifth most common problem, with a frequency of 40, is that students reported spending excessive time searching for specific messages or important information within Messenger threads.

Conclusion

The study found that Aviation students from the BSAT course at Indiana Aerospace University recognize Facebook Messenger as a valuable tool for real-time communication, accessibility, and activity coordination, rating it as "Always" effective in these areas. However, its usefulness for flight scheduling and information dissemination was rated only as "Often," suggesting that while Messenger supports basic communication, it is less effective for more complex tasks. Students also reported common challenges such as delayed responses in group chats, difficulties in file sharing, internet connectivity issues, off-topic discussions, and retrieving older messages. These findings emphasize the need for clearer communication protocols and the integration of supplementary tools to address the limitations of Messenger in academic and aviation-related contexts.

To enhance communication and coordination, several recommendations are proposed. First, students should establish clear group chat norms to ensure responsiveness, such as acknowledgment reactions and regular check-ins. For managing file-sharing challenges, cloud storage platforms like Google Drive or OneDrive are recommended for handling larger media files effectively. To address connectivity issues, email and shared documents can serve as reliable alternatives. Separating academic and non-academic conversations into different chat groups can help reduce distractions, while a centralized digital reference file (e.g., Google Docs) can streamline access to essential updates and minimize time lost in searching through conversations. Together, these measures can strengthen the effectiveness of Messenger integration in aviation education.

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