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RESEARCH ARTICLE

The Influence of Instagram on Career Guidance Among Aerospace Engineering Students

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Abstract

As social media increasingly shapes how students gather information, Instagram has become a popular yet informal tool for career exploration, especially among Aerospace Engineering students with limited access to formal guidance. This study examines Instagram's influence on career development, specifically in terms of self-efficacy, career exploration, and personal goals, using Social Cognitive Career Theory (SCCT) as its theoretical framework. A sequential explanatory mixed-method design was employed, collecting quantitative data through simple random sampling and structured questionnaires, followed by qualitative insights from open-ended responses. Descriptive statistics revealed that Instagram has a varying impact on students' career development. While the platform supported exploration and inspiration, challenges such as difficulty verifying credible content, over-reliance on social media, and the presence of idealized portrayals were also reported.

Keywords: *instagram, career guidance, aerospace engineering students, social cognitive career theory (scct), career exploration*

Introduction

In today's rapidly changing world, career guidance plays a crucial role in helping individuals prepare for professional opportunities. Globalization has reshaped labor markets, making career paths more dynamic and less predictable (OECD, 2020). Watts (2014) emphasized that structured career guidance systems in the United Kingdom help reduce youth unemployment and improve school-to-work transitions. In Asia, countries such as South Korea have invested in career education, with over 80% of students participating in such programs by 2015, resulting in clearer career goals (Ministry of Education & KRIVET, 2015). In Cebu City, Chopitea (2022) found that school, peer, and family influences significantly impact students' career decisions, highlighting the need for strong guidance programs. In the Philippines, Orbeta and Corpus (2021) reported that career guidance remains underdeveloped due to a shortage of guidance counselors and the lack of targeted career resources. This gap has led many students to turn to digital platforms for career exploration. Platforms like Instagram, known for its visual and interactive features, have become informal yet influential sources of career information. For aerospace engineering students at Indiana Aerospace University, where competition is intense and technical skills are in high demand, strong and relevant career guidance is essential. Instagram may serve as a tool for exposure to industry professionals, career paths, and inspiration, especially in the absence of robust institutional support. Understanding how Instagram influences students' career thinking is crucial in tailoring guidance efforts to meet the needs of today's digitally connected learners.

This study is grounded in Social Cognitive Career Theory (SCCT), which emphasizes self-efficacy, career exploration, and personal goals in career development (Lent et al., 2015). Self-efficacy refers to one's belief in one's ability to succeed in specific tasks, while career exploration involves gathering information about oneself and the world of work. Personal goals reflect an intention to pursue specific career paths. These factors can be shaped by exposure to career-related content on social media. Kusumawati and Wahyuningsih (2020) found that

SCCT-based counseling improved students' decision-making skills, showing the theory's relevance to guided career development. In today's digital world, Instagram serves as an informal but powerful platform for students to explore career options, connect with professionals, and build confidence. Tkachuk et al. (2024) noted that social media enhances real-time interaction and access to mentors. These features support decision-making as an ongoing, reflective process requiring accurate information and support (Yale University Office of Career Strategy, 2022). While challenges such as misinformation exist, Instagram's interactive and visual appeal makes it a

valuable complement to traditional career guidance, especially in specialized fields like aerospace engineering.

Social media has become a powerful yet informal tool for career development. Platforms like LinkedIn focus on networking, while YouTube offers educational content. Instagram, renowned for its visual storytelling and high engagement, strongly appeals to Generation Z students, including those in Aerospace Engineering at Indiana Aerospace University. Many follow accounts like NASA, Boeing, and SpaceX for inspiration and exposure to fields like spacecraft design and propulsion. However, Instagram's curated content can distort perceptions or overwhelm students with unrealistic portrayals. While widely used, its actual role in guiding career decisions remains unclear, highlighting the need to assess its true impact on early-stage engineering students.

With the rapid advancement of technology, various areas, including education, career development, and communication, have undergone significant transformations. Higher education institutions have increasingly shifted toward digital approaches, using social media platforms like Instagram for informational and promotional activities (Trach, 2022). These not only represent university departments online but also foster meaningful interaction among students, aligning with their interests, and making them effective tools for career guidance. According to Kara (2019), this evolution in media use has prompted educators and researchers to look beyond traditional teaching methods and examine how digital tools impact students' career decisions. While growing attention is being given to the role of social media like Instagram in supporting students' educational and professional goals, there is still a lack of clear understanding of how and why students engage with these platforms for career guidance, especially in specialized fields like Aerospace Engineering, where such tools may serve as valuable resources in shaping future aspirations.

Recent research has begun to explore how Instagram and other social media platforms support student career development, especially in specialized fields. Studies show that Instagram offers more than just visual inspiration—it enables self-branding, signals soft skills, and provides exposure to professionals' career paths and workplace cultures (Lee, 2023). Microblogs and mentorship accounts on Instagram also act as informal career support, complementing traditional services. However, most existing studies focus on general social media use or platforms like LinkedIn, with limited attention to Instagram's specific impact on career decision-making in STEM fields, such as aerospace engineering (O'Connor et al., 2022). Additionally, the lack of longitudinal research leaves a gap in understanding how ongoing Instagram engagement shapes career paths over time. This study seeks to fill that gap by examining Instagram's influence on the career perceptions and aspirations of aerospace engineering students.

Despite Instagram's popularity among young adults, its role as a career guidance tool remains underexplored. While students use it for more than entertainment—often engaging with posts from engineers, companies, and schools—its subtle influence on their career thinking is not fully understood. For undecided aerospace engineering students, this exposure can shape interests and perceptions of the industry. Most existing research focuses on LinkedIn or general social media use, overlooking Instagram's unique visual appeal. This study addresses that gap by examining how Instagram influences the career thinking of aerospace engineering students at Indiana Aerospace University. It focuses on three key variables: self-efficacy, career exploration, and personal goals. As aerospace students themselves, the researchers aim to understand how Instagram affects career confidence, decision-making, and goal alignment. The findings will inform educators and advisors on how to effectively utilize social media to support students' career development.

Research Question/ Objectives

This study aimed to evaluate the influence of Instagram on career guidance among Aerospace Engineering students at Indiana Aerospace University for the A.Y. 2024-2025. Specifically, it sought to answer the following sub-problems:

1. Determine the influence of Instagram among Aerospace Engineering Students' Career Guidance in terms of:
    1.1. self-efficacy;
    1.2. career exploration; and
    1.3. personal goals?
2. Rank the problems encountered by the Aerospace Engineering Students at Indiana Aerospace University

Methodology

Research Design

This study employed a sequential explanatory mixed-method research design to explore the influence of Instagram on career guidance among Aerospace Engineering students at Indiana Aerospace University. The research was commenced with a quantitative phase, during which data were collected through a structured questionnaire distributed via Google Forms to 100 students selected via simple random sampling. The survey included 5-point Likert scale items, multiple-choice questions, ranking questions, and closed-ended questions to gather information on Instagram usage patterns, the types of content accessed (such as aerospace-related posts), and students' perceptions of Instagram's effectiveness as a tool for career guidance. This phase aimed to identify general trends and usage behaviors. Following this, the qualitative phase incorporated open-ended questions to allow participants to share personal insights and experiences on how Instagram has influenced their career awareness, decision-making, and planning. Together, the two phases provided both measurable data and an in-depth understanding of how Instagram supports or complements traditional forms of career guidance in the context of aerospace education.

Participants/Respondents

With social media playing a significant role in students' lives, the researchers sought to investigate the impact of Instagram on career

guidance among Aerospace Engineering students at Indiana Aerospace University. Out of the approximately 163 Aerospace Engineering students from first year to fifth year, 100 were selected using simple random sampling. Students enrolled during the first and second semesters of the academic year 2024–2025 are part of the population. The researchers included students from all year levels to ensure that the study gathers a wider range of insights from different stages of the college experience. This means that the research will have more accurate and diverse responses. Informed consent was obtained before data collection to ensure that the research was conducted ethically, that participants were fully aware of the purpose of the research study, and that their information and privacy were protected.

Instrument

The research instrument for this study is an online survey administered through Google Forms and distributed to a sample of Aerospace Engineering students. The questionnaire consists of a combination of multiple-choice items, Likert scale statements, and open-ended questions. The Likert scale uses the following response options: 5 – Strongly Agree, 4 – Agree, 3 – Neutral, 2 – Disagree, and 1 – Strongly Disagree. Prior to the actual data collection, the instrument underwent a pilot test with a small group of students to assess clarity and comprehensibility. Revisions were then made based on the feedback received. The finalized survey was then distributed online to the intended respondents. Open-ended questions were sent separately to a selected group of students to gather more in-depth insights. Once the data collection period concluded, all responses were compiled in spreadsheet format and analyzed using descriptive statistics, including frequency, rate, weighted mean, and item ranking. All participant responses were kept anonymous and were treated in accordance with the ethical standards of research.

Data Analysis

In this study, data were collected using a questionnaire based on a 5-point Likert scale with numerical values and descriptive equivalents to measure the perceptions of Aerospace Engineering students regarding the influence of Instagram on their career development. The collected data were analyzed using frequency, rate, weighted mean, and ranking to determine the level of agreement and identify the most significant perceptions.

Ethical Considerations

This study strictly adhered to ethical guidelines to ensure the safety, privacy, and autonomy of respondents. Aerospace Engineering students at Indiana Aerospace University received a clear explanation of the study's purpose, procedures, and their rights before data collection. Informed consent was obtained prior to participation. To maintain confidentiality, no personal or publicly restricted information was collected or disclosed. All data were securely stored and used solely for academic and research purposes. The researchers are committed to upholding ethical standards, protecting respondent privacy, and ensuring responsible use of findings.

Results and Discussion

Self-Efficacy

Self-efficacy is defined as an individual's belief in their ability to successfully perform a task or achieve a specific goal. It is a central component in understanding how career guidance among aerospace engineering students is shaped, as supported by the Social Cognitive Career Theory. Self-efficacy has a significant influence on how individuals approach challenges, interact with career-related information, and make decisions. It affects how students explore career options, set achievable goals, and engage in meaningful planning, ultimately guiding them toward informed and confident career choices.

Table 1 presents the perception of aerospace engineering students regarding self-efficacy and its influence through Instagram.

Table 1. *Self-Efficacy*

Indicators	*Weighted Mean*	*Description*
1. Observing aerospace engineers' achievements on Instagram increases my confidence in my own ability to succeed in the aerospace industry.	4.24	Strongly Agree (SA)
2. Instagram's portrayal of aerospace careers strengthens my belief in my ability to adapt to the competitive and fast-changing nature of the industry.	4.19	Agree (A)
3. Engaging with aerospace-related content (e.g., NASA, Boeing, SpaceX) on Instagram reinforces my conviction that I can contribute meaningfully to the field.	4.18	Agree (A)
4. Viewing career-related content on Instagram makes me feel more capable of pursuing my desired career path in aerospace engineering.	4.13	Agree (A)
5. Instagram, as a visual platform, enhances my belief that I possess the necessary skills to secure employment in the aerospace sector after graduation.	4.00	Agree (A)
Average Weighted Mean	4.15	Agree (A)

Legend: 4.21-5.00 = Strongly Agree, 3.41-4.20 = Agree, 2.61-3.40 = Neutral, 1.81-2.60 = Disagree, 1.00-1.80 = Strongly Disagree

Career Exploration

Career exploration is the process of researching and evaluating potential career paths to make informed and purposeful decisions. For aerospace engineering students, Instagram plays a growing role by offering exposure to industry professionals, educational content, and

career experiences. Guided by Social Cognitive Career Theory, this digital engagement enhances students' awareness, shapes their interests, and encourages proactive goal-setting in their career planning. Table 2 presents the perceptions of aerospace engineering students regarding career exploration and the influence of Instagram.

Table 2. *Career Exploration*

Indicators	*Weighted Mean*	*Description*
1. Instagram has made me more aware of different career opportunities in aerospace engineering.	4.16	Agree (A)
2. Instagram content influences the way I plan or think about my future career in aerospace engineering.	3.91	Agree (A)
3. I have followed aerospace professionals or industry-related accounts on Instagram for career insights.	3.83	Agree (A)
4. I trust the career-related content I see on Instagram.	3.73	Agree (A)
5. I actively seek career advice or guidance from Instagram content.	3.68	Agree (A)
Average Weighted Mean	3.90	Agree (A)

Legend: 4.21-5.00 = Strongly Agree, 3.41-4.20 = Agree, 2.61-3.40 = Neutral, 1.81-2.60 = Disagree, 1.00-1.80 = Strongly Disagree

Personal Goals

Personal goals are individual objectives that guide personal and professional development. For aerospace engineering students, setting personal goals is essential for staying motivated and focused in a demanding field.

Table 3 presents the perceptions of aerospace engineering students regarding career exploration and the influence of Instagram.

Table 3. *Personal Goals*

Indicators	*Weighted Mean*	*Description*
1. Seeing career-related content on Instagram motivates me to work harder toward my goals.	4.16	Agree (A)
2. Instagram has helped me discover new opportunities that align with my personal goals.	4.04	Agree (A)
3.Instagram has helped me develop a clearer vision of my future career in Aerospace Engineering.	4.01	Agree (A)
4. Instagram has influenced me to seek out additional learning resources or skill-building opportunities.	3.89	Agree (A)
5. Instagram has encouraged me to pursue long-term goals in the Aerospace industry.	3.83	Agree (A)
Average Weighted Mean	3.91	Agree (A)

Legend: 4.21-5.00 = Strongly Agree, 3.41-4.20 = Agree, 2.61-3.40 = Neutral, 1.81-2.60 = Disagree, 1.00-1.80 = Strongly Disagree

Problems Encountered

The problems encountered in the influence of Instagram on the career guidance of Aerospace Engineering students stem from the platform's nature as a visually driven and informal source of information.

While Instagram offers access to a wide range of career-related content, its emphasis on aesthetics and casual presentation may lead students to overlook valuable but less visually appealing information. Additionally, the lack of structure and guidance in navigating professional content can result in missed opportunities for learning and inspiration. Without targeted efforts to connect students with credible industry figures and educational resources, Instagram's potential as a career guidance tool remains underutilized.

Table 4 presents the Problems Encountered by aerospace engineering students in career guidance due to the influence of Instagram.

Table 4. *Problems Encountered*

Indicators	*Frequency*	*Rank*
I do not actively seek career advice or guidance from Instagram content.	9	1
I have not followed any aerospace professionals or industry-related accounts for career-related insights.	5	2
I do not feel that observing aerospace engineers' achievements on Instagram increases my confidence in succeeding in the aerospace industry.	4	3.5
Instagram has not influenced me to seek additional learning resources or skill-building opportunities.	4	3.5
Instagram's portrayal of aerospace careers does not help reinforce my belief that I can adapt to the demands of the industry.	2	5
Seeing career-related content on Instagram does not motivate me to work harder toward my long-term goals.	1	6
Content from aerospace-related accounts on Instagram does not enhance my belief that I can contribute meaningfully to the field.	0	7.5

Instagram content does not influence how I plan or think about my future career in aerospace engineering.	0	7.5
Instagram has not helped me develop a clearer vision of my career in aerospace engineering.	0	7.5
I have not discovered new opportunities related to my personal goals through Instagram.	0	7.5

The top five problems encountered in the influence of Instagram on the career guidance of aerospace engineering students reveal several key concerns. The most significant problem is the lack of active seeking of career advice or guidance from Instagram content, reported by nine students. This is followed by the lack of following aerospace professionals or industry-related accounts for career-related insights, which was identified by five students. Two other issues share the third rank, each reported by four students. These include the perception that viewing aerospace engineers' achievements on Instagram does not increase confidence in succeeding in the field, and the belief that Instagram does not influence students to seek additional learning or skill-building opportunities. Lastly, two students reported that they perceive Instagram's portrayal of aerospace careers as not reinforcing the belief that they can adapt to the industry's demands.

The ranking of the problems encountered in the influence of Instagram on career guidance of aerospace engineering students reveals several key issues, with the most significant being the lack of active seeking of career advice or guidance from Instagram content, with a frequency of 9.

The second-highest problem is with a frequency of 5. It is the lack of following aerospace professionals or industry-related accounts for career-related insights.

The third highest problem is with a frequency of 4. It is the perception that observing aerospace engineers' achievements on Instagram does not increase confidence in succeeding in the aerospace industry.

The third-highest problem also occurs with a frequency of 4. It is the belief that Instagram has not influenced students to seek additional learning resources or skill-building opportunities.

The fifth most common problem occurs at a frequency of 2. It is the perception that Instagram's portrayal of aerospace careers does not help reinforce the notion that students can adapt to the industry's demands.

Conclusion

The study revealed that Aerospace Engineering students at Indiana Aerospace University recognized Instagram as an influential platform in shaping their career guidance. Students reported that Instagram contributes positively to their confidence, awareness of career opportunities, and motivation to pursue professional goals. These findings highlight Instagram's role as an accessible yet informal tool for career development, demonstrating its potential to complement traditional guidance methods by offering inspiration, exposure to industry professionals, and insights into career pathways.

To maximize Instagram's positive influence, the study recommends that educators and career guidance offices integrate social media awareness into career seminars, helping students recognize its value as a platform for networking and learning. Institutions and student organizations should also provide curated lists of credible aerospace professionals and industry accounts to ensure that students have access to reliable content. Additionally, aerospace professionals and content creators are encouraged to share balanced narratives that include both achievements and challenges, making success in the field more relatable. Finally, career-related Instagram content should incorporate calls-to-action linking to courses, webinars, and skill-building opportunities, while also portraying real workplace scenarios and adaptability skills to inspire confidence and reinforce students' belief in their ability to thrive in the aerospace industry.

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