Journal of Advanced Studies in Aviation, Aerospace, and Management
2026, ISSN 3062-4460
Volume 1 Issue 4
https://doi.org/10.70838/jasaam.010405
Received: 5 July 2025 Accepted: December 15, 2025

RESEARCH ARTICLE

Impact of YouTube Career Guidance Video on Aircraft Maintenance Technology students at Indiana Aerospace University

Author/s: Georgina Simone P. Yuag,* John Mark Anthony L. Anade, Danica P. Cansancio, Vrienzhelle Von M. Docdoc, Jedrek C. Ferrer, Dan Mauriece G. Garces, Justin Dave S. Paran, Hiro Jay D. Panie, Ann Art Randolph R. Pepito, Anthony G. Villanueva, Kimberly N. Cui-Toring, Eugene E. Toring, and Jhoselle Tus

Corresponding author email: yuaggeorgina07@gmail.com
Affiliation: Indiana Aerospace University

Abstract

This mixed-methods study examined the impact of YouTube-based career guidance videos on the career awareness and decision-making of upcoming third-year Aircraft Maintenance Technology students at Indiana Aerospace University. Conducted from the third week of May to the second week of June 2025, the study employed quantitative surveys and qualitative interviews to assess students' exposure to YouTube content and its influence on their understanding of industry expectations, licensing requirements, and career opportunities. Data were analyzed using frequency distribution, weighted mean, ranking, and thematic analysis. Findings indicate that YouTube serves as a valuable informal resource for clarifying technical career pathways; however, its use remains largely unstructured within the local academic context. The study recommends the institutional integration of curated YouTube content into formal career guidance programs to enhance students' career readiness and informed decision-making.

Keywords: *accessibility, career awareness, engagement, technology students, decision-making*

Introduction

The integration of digital technologies has significantly transformed contemporary education, particularly in the areas of career counseling, skills development, and lifelong learning. In regions such as the United States and Europe, online resources, video-based instruction, and multimedia platforms are increasingly utilized to support students' academic and career development. These innovations are especially relevant in highly technical fields such as Aircraft Maintenance Technology, where learners must continuously adapt to evolving industry standards and regulatory requirements. This global shift aligns with the United Nations Sustainable Development Goal 4, which emphasizes inclusive, equitable, and quality education that promotes lifelong learning opportunities.

In Asia, countries including Singapore, South Korea, and Japan have successfully incorporated digital tools into technical and vocational education systems. In contrast, developing countries such as the Philippines continue to face challenges in providing structured and accessible career guidance, particularly in specialized and technical disciplines. These challenges are more pronounced in rural and underserved areas, where traditional counseling services and educational resources are limited. Although the Universal Access to Quality Tertiary Education Act of 2017 aims to improve access to higher education, the integration of digital platforms for career guidance remains insufficient. Consequently, many students struggle to align their academic preparation with labor market expectations.

Institutions such as Indiana Aerospace University play a critical role in preparing future aviation professionals, particularly in strategic locations such as Lapu-Lapu City, which hosts the Mactan–Cebu International Airport. Despite the growing demand for skilled aviation maintenance personnel, many upcoming third-year Aircraft Maintenance Technology students experience uncertainty regarding their career trajectories. This uncertainty is often attributed to limited access to relevant, updated, and industry-aligned career guidance. While the Technical Education and Skills Development Authority (TESDA) Act of 1994 emphasizes skills development aligned with workforce needs, the use of digital and multimedia resources for career exploration remains underutilized.

This study is grounded in Connected Learning Theory (Ito et al., 2016), which emphasizes the integration of learners' academic pursuits, peer interactions, and personal interests. In technical education, platforms such as YouTube provide access to practical demonstrations, expert interviews, and real-world scenarios that enhance students' understanding of career pathways. Media Richness Theory (Dennis

et al., 2018) further supports the use of audiovisual media, suggesting that rich media formats improve comprehension of complex and hands-on concepts common in aviation maintenance.

Additionally, Li's (2019) Equity Theory of Technology Integration highlights the role of digital platforms in democratizing access to industry knowledge, particularly for students with limited institutional support. YouTube enables exposure to authentic aviation environments, certification processes, and professional expectations. Social Cognitive Theory (Schunk & DiBenedetto, 2020) also underpins this study, as observational learning through video content can enhance students' self-efficacy and career confidence. However, the unregulated nature of online content raises concerns regarding misinformation and idealized portrayals of professional roles, underscoring the need for guided and critical use.

While social media platforms such as LinkedIn, Instagram, and YouTube increasingly shape informal career development, empirical research on YouTube's role in technical career decision-making remains limited. Although prior studies have examined its educational value, fewer have explored its influence on career planning and identity formation within vocational and technical programs. Addressing this gap, the present study investigates the role of YouTube career guidance videos in shaping the career awareness and decision-making of Aircraft Maintenance Technology students, aligning with national policies such as the Continuing Professional Development Act of 2016, which promotes lifelong learning and professional growth.

Research Objectives

This study aimed to evaluate the Impact of the YouTube Career Guidance video on Upcoming third-year Aircraft Maintenance Technology students at Indiana Aerospace University for the A.Y. 2024-2025. Specifically, it sought to answer the following problems:

1. Determine the profile of the respondents in terms of age and gender.
2. Evaluate the effectiveness of YouTube video content as a tool for career guidance in Aircraft Maintenance Technology in terms of:
   2.1. accessibility;
   2.2. awareness; and
   2.3. engagement?
3. Rank the problems encountered by the Aircraft Maintenance Technology students.

Methodology

Research Design

This study employed a mixed-methods research design, combining quantitative and qualitative approaches to examine the impact of YouTube career guidance videos on Aircraft Maintenance Technology students at Indiana Aerospace University. The quantitative component involved the administration of structured surveys to upcoming third-year students to measure changes in career awareness, motivation, and decision-making after exposure to YouTube-based career guidance content. This approach enabled the identification of general patterns and trends across the student cohort.

The qualitative component consisted of focus group discussions, which provided in-depth insights into students' perceptions, experiences, and interpretations of the video content. Through guided discussions, participants elaborated on which aspects of the videos they found most informative and how these influenced their career thinking. The integration of quantitative and qualitative data allowed for triangulation, enhancing the validity and depth of the findings. This mixed-methods approach was deemed appropriate for capturing both measurable outcomes and nuanced personal experiences related to digital career guidance in a specialized technical field.

Respondents

The respondents of the study consisted of 100 upcoming third-year Aircraft Maintenance Technology students at Indiana Aerospace University, representing approximately the entire cohort. All participants had prior exposure to YouTube career guidance videos related to aviation maintenance. The selection of respondents was purposive, as the study aimed to examine the relevance and impact of YouTube-based career guidance on students at a critical stage of their academic and career preparation.

Instrument

A researcher-developed questionnaire was used to collect quantitative data and was administered through Google Forms. The instrument included five Likert-scale items ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) to assess students' career awareness, motivation, and decision-making before and after viewing YouTube career guidance videos. The questionnaire also contained multiple-choice items to gather demographic information and data on video viewing habits.

To complement the survey data, a focus group discussion guide was developed to collect qualitative insights into students' experiences, perceptions, and engagement with the YouTube content. Both instruments underwent expert validation to ensure content validity, clarity, reliability, and alignment with the research objectives.

Procedure

Data collection followed a mixed-methods procedure involving surveys and focus group discussions. A total of 100 upcoming third-year Aircraft Maintenance Technology students participated in the study. Quantitative data were gathered through a self-administered

online questionnaire distributed via Google Forms, which included Likert-scale, multiple-choice, and open-ended questions.

Qualitative data were collected through focus group discussions, allowing participants to share their perspectives and personal experiences regarding the use of YouTube for career guidance. Prior to data collection, participants were informed of the study's purpose, and informed consent was obtained. Confidentiality was maintained throughout the process, and all responses were used solely for academic research purposes.

Data Analysis

Quantitative data were analyzed using descriptive statistical techniques, including frequency distribution, weighted mean, and ranking, to assess students' career awareness, motivation, and decision-making before and after exposure to YouTube career guidance videos. Responses from the 5-point Likert scale were interpreted using standardized ranges to determine levels of agreement.

Qualitative data from the focus group discussions were analyzed thematically. Emerging themes were identified, coded, and interpreted to provide deeper insights into students' experiences and perceptions. The integration of quantitative and qualitative findings facilitated a comprehensive understanding of the influence of YouTube content on students' career perspectives.

Ethical Considerations

Ethical standards were strictly observed throughout the study. Participants were fully informed of the research objectives, procedures, and potential risks prior to participation. Participation was voluntary, and students were informed of their right to withdraw at any stage without academic or institutional consequences.

All data were treated with strict confidentiality, with no identifying information included in the analysis or reporting of results. Data were securely stored and accessible only to the research team. The research instruments were designed to minimize discomfort or distress, and appropriate support mechanisms were available if needed. Participants were given the opportunity to review their responses, ensuring transparency and autonomy. The researchers declared no conflicts of interest, and all findings were reported accurately, with limitations and potential biases acknowledged to uphold research integrity.

Results and Discussion

Profile of the Respondents

This study, conducted by students of Indiana Aerospace University, is presented and tabulated in terms of Accessibility, Career Awareness, and Engagement.

Figure 1 illustrates the respondents' profile in terms of age, with the majority falling within the 20-21 year age range.

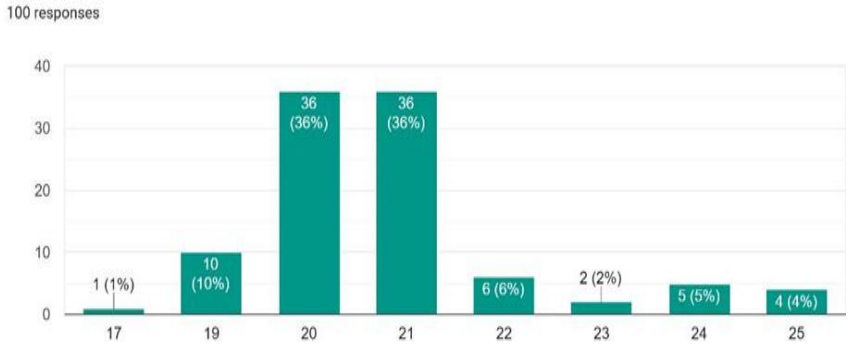
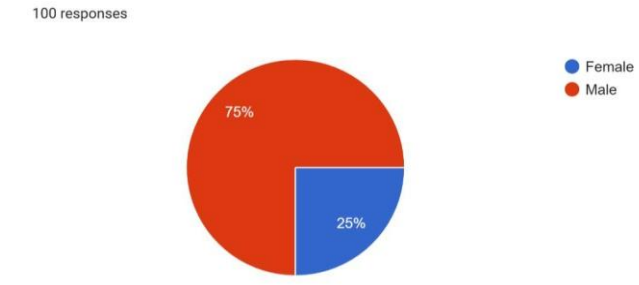


Figure 2 shows the results of the survey questionnaire, in which the research respondents were asked about their gender profile. There were 100 respondents in total (100%). The majority of the respondents were male, with 75%, and female, with 25%



Accessibility

Accessibility refers to the ease with which students can access and utilize the YouTube career guidance video as a learning and decision-

making tool. It includes factors such as internet availability, video clarity, convenience of viewing, and the platform's user-friendliness. In this context, accessibility plays a crucial role in determining whether the guidance video is a practical resource for upcoming 3rd-year Aircraft Maintenance Technology students.

Table 1 presents students' responses in terms of accessibility.

Table 1. *Accessibility*

Indicators	*Weighted Mean*	*Description*
Having constant access to the video lets me rewatch important sections, which helps me better remember key career information.	4.48	Strongly Agree
Being able to watch the videos on any device allows me to continue learning even outside the classroom.	4.44	Strongly Agree
YouTube career guidance videos are easily accessible anytime, which helps me learn at my own pace and convenience.	4.44	Strongly Agree
Videos available in a familiar language help me understand technical terms more easily, which supports better comprehension.	4.44	Strongly Agree
The videos' clear visuals and audio make complex topics easier to understand without needing extra explanation.	4.29	Strongly Agree
Average Weighted Mean	4.46	Strongly Agree

Legend: 4.21-5.00: Strongly Agree, 3.41- 4.20: Agree, 2.61.3.40: Neutral, 1.81-2.60: Disagree, 1.81 - 2.60: Strongly Disagree

Career Awareness

Career awareness is the understanding of potential paths in Aircraft Maintenance Technology, including industry roles, educational requirements, and growth opportunities. Tools like YouTube videos help students explore careers and make informed choices. This aligns with Super's Lifespan, Life-Space Theory, which highlights the importance of career exploration in early life stages to support long-term development (Super, 1990).

Table 2 presents students' responses in terms of career awareness.

Table 2. *Career Awareness*

Indicators	*Weighted Mean*	*Description*
1. The job role examples in the video help me recognize which aviation careers suit my skills and interests.	4.84	Strongly Agree
2. The video introduces various career paths in Aircraft Maintenance, helping me understand more options for my future.	4.50	Strongly Agree
3. The video's real-world content increases my awareness of what to expect in the AMT field, helping me set clearer goals.	4.41	Agree
4. The knowledge I gained from the video makes me more confident in pursuing my chosen Aircraft Maintenance career.	4.39	Strongly Agree
5. Information about qualifications and certifications in the video helps me plan my next steps after graduation.	4.17	Strongly Agree
Average Weighted Mean	4.41	Strongly Agree

Legend: 4.21-5.00: Strongly Agree, 3.41- 4.20: Agree, 2.61.3.40: Neutral, 1.81-2.60: Disagree, 1.81 - 2.60: Strongly Disagree

Engagement

Engagement refers to the level of attention, interest, and involvement that students exhibit while watching the YouTube career guidance video. It includes how effectively the video content captures their interest, maintains focus, and motivates them to learn more about their career path. High engagement typically enhances retention of information and increases the likelihood of students taking actionable steps toward their goals.

Table 3 presents students' responses in terms of engagement.

Table 3. *Engagement*

Indicators	*Weighted Mean*	*Description*
1. The video's visuals and presentation keep me engaged, helping me stay focused and absorb information better.	4.39	Strongly Agree
2. Personal stories and examples in the video help me imagine myself working in the Aircraft Maintenance industry.	4.39	Strongly Agree
3. The video inspires me to take practical steps—like asking questions or seeking guidance—which helps me prepare for my career.	4.39	Strongly Agree
4. The video makes me reflect on my career direction, which helps me better understand what I want for my future.	4.36	Strongly Agree
5. I feel more motivated to explore and research aviation careers after watching the video.	4.32	Strongly Agree

Average Weighted Mean	4.37	Strongly Agree

Legend: 4.21-5.00: Strongly Agree, 3.41- 4.20: Agree, 2.61.3.40: Neutral, 1.81-2.60: Disagree, 1.81 - 2.60: Strongly Disagree

Problems Encountered

The problems encountered in utilizing YouTube career guidance videos among upcoming 3rd-year Aircraft Maintenance Technology students include issues such as limited internet access, lack of motivation to watch lengthy content, distraction while viewing, low video quality, and limited awareness of the video's existence. These factors can hinder the video's effectiveness in delivering meaningful career insights.

Table 4 contains the various problems encountered in relation to the impact of YouTube career guidance videos.

Table 4. *Problems Encountered*

Indicators	*Frequency*	*Rank*
I encountered issues accessing the video due to slow internet or technical glitches.	59	1
The content in the video was unclear or difficult to follow due to poor audio or visuals.	26	2
The video lacked sufficient details about specific career opportunities in Aircraft Maintenance.	25	3
The video did not clearly explain the required skills and certifications for pursuing a career in Aircraft Maintenance.	22	4
The video did not provide enough information on the day-to-day responsibilities of professionals in the field.	19	5.5
I did not feel inspired to take action or further explore the career paths presented in the video.	19	5.5
The video was too short and did not cover enough information to help me make career decisions.	18	7
The video did not relate to my personal career interests in Aircraft Maintenance Technology.	16	8
I found the pacing of the video too fast or too slow, which made it difficult to engage with the content.	15	9
The video did not motivate me to seek additional resources or mentorship in the Aircraft Maintenance field.	14	10

The problems encountered by upcoming 3rd-year Aircraft Maintenance Technology students in using YouTube career guidance videos were ranked based on the frequency of responses, as shown in Table 4.

The top three problems encountered are:

Difficulties accessing the video due to slow internet or technical glitches – This was the most frequently reported issue, with 59 respondents noting that slow internet connections or technical glitches hindered their access to the video. This makes it the top-ranked problem.

Unclear or difficult-to-follow content – The second highest concern, reported by 26 respondents, was that the video content was unclear or difficult to follow, likely due to poor audio or visual quality.

Lack of sufficient details about specific career opportunities in Aircraft Maintenance – Ranked third, with 25 respondents, this issue pointed to a lack of comprehensive information about actual job roles and paths within the field.

The fourth-ranked problem, with 22 responses, was that the video did not clearly explain the necessary skills and certifications needed to pursue a career in Aircraft Maintenance.

Both the fifth and sixth ranks were shared, with 19 respondents each:

Some indicated the video did not provide enough information about the day-to-day responsibilities of professionals in the field.

Others mentioned that the video did not inspire them to take action or explore the career paths presented.

Conclusion

The third-year Aircraft Maintenance Technology students at Indiana Aerospace University strongly affirmed the relevance of the study titled "The Impact of YouTube Career Guidance Videos on Incoming Third-Year Aircraft Maintenance Technology Students at Indiana Aerospace University." They agreed that YouTube serves as a valuable tool for accessibility, career awareness, and student engagement, particularly in broadening their understanding of job opportunities and required skills in the field. However, the effectiveness of the videos was hindered by issues such as poor internet access, low-quality content, and limited motivational impact. These findings suggest that while YouTube has strong potential as a career guidance platform, its full benefits can only be realized with improvements in quality and content delivery.

To enhance the usefulness of YouTube career guidance videos, several measures are recommended. Educational institutions can address connectivity challenges by offering offline access to videos or strengthening campus internet services. Content creators should ensure high production quality, with clear audio, proper lighting, and professional editing to make the material more understandable. Videos

should also provide in-depth details on career paths, certifications, and industry expectations, while incorporating real-life testimonials and success stories to boost student motivation. Lastly, developing extended versions or video series would allow for more comprehensive coverage, giving students the flexibility to explore different aspects of the aviation maintenance profession at their own pace.

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