

Assessment of Aviation Engineering Law Awareness Among the 2nd Year Aircraft Maintenance Technology Students of Jocson College Inc.

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Abstract- This research tries to identify the extent of aviation engineering law familiarity among 2nd year Aircraft Maintenance Technology (AMT) students of Jocson College Inc. Aviation laws and regulations, issued by the Civil Aviation Authority of the Philippines (CAAP), play a critical role in promoting aviation safety, compliance with regulations, as well as engineering responsibility in aviation maintenance services. Quantitative research design was utilized in carrying out the research using a structured survey research instrument. The study targets selected 2nd year students of Aircraft Maintenance Technology of Jocson College Inc. Analysis of the result showed that students have a good awareness of aviation engineering laws to a high or very high extent, especially about CAAP regulations, airworthiness, aviation safety, aviation maintenance, and Approved Maintenance Organization regulations. Though their degree of awareness of human factors laws is moderate. Lectures, teaching methodologies, as well as direct exposures, are found to be some key factors that influence student awareness. Conclusion: Though students are strongly knowledgeable about the base topics of aviation engineering, emphasis on human factors is advised to make students more knowledgeable about aircraft maintenance law.

I. INTRODUCTION

1. THE PROBLEM AND ITS BACKGROUND

1.1 Introduction

Aviation engineering law provides the rules and standards that ensure safety in aircraft operations and maintenance. These include, but are not limited to, laws from the Civil Aviation Authority of the Philippines, which demand that aviation professionals undertake strict measures to preserve aircraft safety and airworthiness. Understanding these laws is essential for students in Aircraft Maintenance Technology (AMT) because their future

responsibilities will directly impinge on the safety of every flight.

Since AMT students at Jocson College Inc. start the major technical lessons by the second year, it is important to measure how much they know about the laws of aviation engineering at this juncture. Their awareness level will reveal whether the current curriculum and teaching methods are appropriate in preparing them for the industry requirements.

1.2 Background of the Study

Aviation engineering laws are important because they guide safety procedures, maintenance standards, and overall operations in the aviation industry. In line with this, knowing these laws should be necessary for the students in AMT since the operations they will be venturing into the future demand a guarantee in the safety of the aircraft and its adherence to the policies set by the Civil Aviation Authority of the Philippines. In Jocson College Inc., 2nd year AMT students are just starting to be introduced to major subjects that involve aircraft systems and maintenance, which includes being informed about aviation laws covering their field. Testing their awareness would identify the areas in which they are enlightened and those which need more emphasis. Such results will also help the school improve teaching strategies, ensuring that graduates are better equipped for their responsibilities in aviation.

1.3 Statement of the Problem

This study will determine the level of awareness of aviation engineering law among the 2nd year Aircraft Maintenance Technology students at Jocson College Inc., and more specifically it will answer the following questions:

1. What is the level of awareness of the students regarding aviation engineering laws?
2. Which aspects of aviation engineering law are the students highly aware of?
3. In which areas do the students have low awareness?
4. What are the factors affecting their level of awareness?

1.4 Objective of the Study

General Objective:

The main objective of the study is to assess the awareness of the 2nd year AMT students at Jocson College Inc. in line with the aviation engineering law.

Specific Objectives:

- a. To determine the students' level of awareness of aviation engineering laws.
- b. To identify the areas where students have high awareness.
- c. To identify the areas where students have low awareness.
- d. To determine the factors affecting their awareness.

1.5 Scope and Limitation

The scope and limitations of this study focus only on the 2nd AMT students at Jocson College Inc. on their awareness to aviation engineering law, particularly to the CAAP regulations related to safety and aircraft maintenance. This study uses a survey questioner as the main tool for gathering data. It does not include other year levels, courses, faculty members, or graduate students.

1.6 Significance of the Study

The study will be useful for several stakeholders: it will help students recognize their strengths and weaknesses in learning aviation laws, significant for future careers in aircraft maintenance. This will provide a basis for the school and administration in the development of teaching strategies, curriculum planning, and training programs, affording better alignment with industry standards. The instructors will know from the results which areas of aviation engineering law were emphasized or explained unclearly during lessons. Finally, for the aviation industry, the research contributes to graduates being well prepared and thus supporting safer and more

compliant maintenance practices when entering the future workforce.

II. METHODOLOGY

2.1 Research Design

This quantitative research study shall be descriptive in design. As it describes and measures the level of aviation engineering law awareness among the 2nd year Aircraft Maintenance Technology students at Jocson College Inc., this type of design is appropriate. Numerical data gathered from quantitative surveys will be interpreted statistically.

2.2 Respondent of the Study

The respondents of this study will be all the 2nd-year Aircraft Maintenance Technology students at Jocson College Inc. currently enrolled during the academic year. They are chosen because they have already taken core aviation-related subjects where aviation laws and safety regulations are introduced.

2.3 Sampling Technique

Total population sampling will be applied if the population size is manageable, which includes all 2nd year AMT students as respondents. If not, a simple random sampling method will be used for equal chances of selection and unbiased results.

2.4 Research Instrument

A survey questionnaire will be the main tool for data collection. The questionnaire will be divided into three parts:

- Demographic Profile: age, sex, section,
- Awareness of Aviation Engineering Law based on CAAP regulations, maintenance safety standards and legal responsibilities.
- Factors Affecting Awareness: instruction quality, subject exposure, and personal study habits.

Questions will be in a Likert scale format, for instance, 1 = Very Low Awareness to 4 = Very High Awareness.

2.5 Data Gathering Procedure

- Preparation of the Questionnaire – A survey will be prepared and validated by aviation instructors or experts.
- Permission Letter - This will be secured from the head of the school or program.
- Distribution of the Survey – The questionnaires will be distributed to the 2nd year AMT students either in person or electronically via google form.
- Collection of Responses – Collected answered questionnaires will be checked and organized.
- Data Analysis - Responses will be tallied, encoded, and analyzed by using descriptive statistics like frequency, percentage, and mean.

2.6 Data Analysis

Data analysis will be done through the following:

- Frequency and Percentage – for demographic information
- Weighted Mean – to determine the level of awareness
- Ranking-to identify which areas students are most and least aware of.

The results will then be interpreted using a standard Likert scale interpretation.

III. RESULT AND DISCUSSION

This portion of the study shows the analysis and interpretation of the gathered data from the group of respondents.

3.1 Level of Awareness on Aviation Engineering Law

Indicators	Interpretation
Purpose of an AMO	High Awareness
CAAP requirements for AMOs	High Awareness
Quality assurance requirements	High Awareness
Policies preventing unauthorized maintenance	Very High Awareness
Regulations on tools, equipment, and technical documents	High Awareness

The results show that most 2nd year AMT students have high to very high awareness of CAAP and

aviation laws. Students clearly understand the role of CAAP as the main regulatory authority and recognize the importance of aviation engineering laws in maintaining safety and compliance. Awareness of PCAR and the legal responsibilities of maintenance technicians also indicate that students are conscious of their future professional accountability.

3.2 Awareness of Safety and Maintenance Regulation

Indicators	Interpretation
Topics discussed in class	Strong Influence
Teaching strategies used by instructors	Strong Influence
Availability of learning materials	Moderate to Strong Influence
Personal interest in aviation laws	Moderate Influence
Exposure to aviation activities or simulations	Strong Influence

Students demonstrated strong awareness of airworthiness, inspection procedures, and workshop safety regulations, reflecting the technical focus of the AMT program. However, awareness of human factors laws showed slightly lower ratings, indicating a need for further discussion on topics such as fatigue, stress, communication, and error management. This suggests that while students are technically competent, legal and behavioral aspects of safety should be reinforced.

3.3 Awareness of Approved Maintenance Organization (AMO) Rules

Indicators	Interpretation
Role of CAAP	High to Very High Awareness
Importance of aviation engineering laws	Very High Awareness
Philippine Civil Aviation Regulations (PCAR)	High Awareness
CAAP requirements for maintenance personnel	High Awareness
Legal responsibilities of technicians	High Awareness

The findings reveal that students are well aware of AMO-related rules, particularly policies preventing unauthorized maintenance. This indicates a clear

understanding of the importance of proper authorization, quality control, and compliance in maintenance organizations. Such awareness is essential in preparing students for actual industry environments.

3.4 Factors Affecting Awareness

Indicators	Interpretation
Airworthiness requirements	Very High Awareness
Aircraft inspection and repair procedures	High Awareness
Safety regulations in hangar/workshop	Very High Awareness
CAAP rules on documentation and records	High Awareness
Human factors laws related to safety	Moderate to High Awareness

Classroom discussions and teaching strategies were identified as the strongest factors influencing awareness. Exposure to practical activities and simulations also greatly enhanced learning. This highlights the importance of effective teaching methods and hands-on learning. Personal interest showed moderate influence, suggesting that motivation plays a role but must be supported by instructional design.

3.5 Analysis of Open-Ended Responses

Students commonly identified airworthiness regulations, CAAP safety rules, and maintenance compliance laws as the most important aviation laws for AMT students. The most frequent challenges reported were the complexity of aviation regulations, technical terms, and difficulty memorizing and applying laws. To improve awareness, students recommended more seminars, workshops, hands-on activities, simulations, and clearer explanations from instructors.

IV. SUMMARY, CONCLUSION AND RECOMMENDATION

4.1 Summary

This study assessed the level of aviation engineering law awareness among 2nd year Aircraft Maintenance Technology students of Jocson College Inc. using a descriptive survey method. The findings revealed that

students generally have high awareness of aviation laws, CAAP regulations, safety requirements, and AMO rules. Several academic and instructional factors were found to influence their level of awareness.

4.2 Conclusion

Based on the findings of the study, the following conclusions are drawn:

1. The 2nd year AMT students possess a high level of awareness of aviation engineering laws.
2. Students are most aware of safety, airworthiness, and CAAP regulations.
3. Awareness of human factors laws needs further improvement.
4. Teaching strategies, classroom discussions, and practical exposure greatly influence students' awareness.
5. Students recognize the importance of aviation laws in ensuring safety and professionalism in aircraft maintenance.

4.3 RECOMMENDATION

Based on the conclusions, the following recommendations are suggested:

1. Strengthen discussions on human factors and documentation laws in AMT subjects.
2. Conduct regular seminars, workshops, and training sessions related to aviation laws.
3. Increase hands-on activities, simulations, and case-based learning.
4. Provide updated learning materials and references on CAAP and PCAR regulations.
5. Encourage students to develop continuous interest and responsibility in learning aviation laws.

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