

## An Effect of Increasing Flight Instructor Competence on Flight Students at API Diploma III Banyuwangi

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### Abstract

*Starting from the establishment of the Banyuwangi Indonesian Pilot Academy, it was started with the Banyuwangi Flight Center. At that time, students who were taught were only limited to printing professional pilots or non-diploma. In carrying out the training, it refers to the civil aviation safety regulations, section 141. Banyuwangi Aviation Workshop is managerially fostered by the Secretariat of the Transportation Human Resources Development Agency and technically fostered by the Human Resources Development Center of Civil Aviation. Over time, the Banyuwangi Pilot Workshop has been transformed into a Banyuwangi Pilot Education and Training Center. At that time, he was still referring to the Civil Aviation Safety Regulations. At the time this journal was written, the Government Regulation on Higher Education from other Ministries had not been issued since Law No. 12 of 2012 concerning Higher Education. Where the regulation and implementation of education refers to the Ministry of Education and Culture, Research and Technology. Where the transformation must adjust the standards or regulations that apply to universities. At the time this journal was written, the Government Regulation on Higher Education from other Ministries had not been issued since Law No. 12 of 2012 concerning Higher Education. In this study, the author aims to prove to the public that several important aspects must be developed by a Flight Instructor beyond the technical competence and non-technical aspects. Among them are aspects of attitude, knowledge, general skills, and special skills. Therefore, the importance of this research is to prove how important it is for Flight Instructors to develop self-improvement, both technical and non-technical. Moreover, the graduates to be printed are transportation officers with a level five KKNi. With university standards, lecturers are required to have a Master's Qualification or Education. Therefore, the competency aspect must be adjusted to the level of a Lecturer so that he is eligible to become a Flight Instructor for a Level five KKNi Diploma Student.*

### Keywords

Indonesian national qualification framework; flight instructor competence; qualities



### I. Introduction

In carrying out his function as a Flight Instructor, he must be able to position himself as a professional Flight Instructor. In terms of aspects of an educator or education staff should have a concept to make or position himself worthy of being a teacher and worthy to be imitated. Although the mention of different names in education and training, a lecturer or instructor is like a teacher, where the things that are conveyed to students deserve to be studied and imitated, that is the concept of a true teacher. Moreover, a Flight Instructor, who is called an instructor, some things are ordered by an instructor to be done according to the instructions of an instructor. In Indonesian, we often hear instructors in everyday life. Such as gymnastics instructors, basic exercise instructors, other training instructors.

Therefore, we will first discuss what kind of instructor the author will discuss later. Before going to the discussion of the Flight Instructor, it would be nice to know in advance what the definition of an instructor is.

The instructor is a title for an individual who is responsible for teaching students in a particular subject area. Instructors teach courses in their area of expertise and develop instructional plans and assignments to give to students. Instructors may have teaching and research responsibilities in schools.

An instructor is someone who teaches at an institution. They may also serve on academic and administrative committees that review policies and may oversee student final assignments. An instructor is a college or university teacher who is below the rank of professor. words such as "teacher", "chair professor", or "professor" as interchangeable terms. While it is true that the meanings are similar, not knowing how to differentiate between them can hinder our understanding of the work of an education provider and how we relate to the learning that is presented to us.

There are specifics to each leadership role in education that will be useful to understand to ensure that the learning experience will meet the specific needs of whoever is learning. For example, a professor would not be trained to teach children's classes in primary education, just as a teacher would not have the necessary training in a particular discipline to teach school students professionally referring competencies.

According to Astuti et al (2019) Education is an obligation of every human being that must be pursued to hold responsibilities and try to produce progress in knowledge and experience for the lives of every individual. Education is one of the efforts to improve the ability of human intelligence, thus he is able to improve the quality of his life (Saleh and Mujahiddin, 2020). Education is expected to be able to answer all the challenges of the times and be able to foster national generations, so that people become reliable and of high quality, with strong characteristics, clear identities and able to deal with current and future problems (Azhar, 2018).

Seeing the important role of each educator and education staff requires us to understand the definition and what are the main tasks and functions as an instructor. Moreover, a Flight Instructor who has many competency skills is required to also act as a teacher who must be an example for his students. At schools or colleges located within the BPSDM Transportation environment, they are required to undergo a period of education in a dormitory. With the boarding education system, many aspects will build a student. In addition to looking at the academic aspect, non-academic aspects or assessment criteria are owned by students who carry out education at the Ministry of Transportation's tertiary institutions. In this case, the Indonesian Aviation Academy Banyuwangi, especially the pilot study program, is educated with a boarding school pattern and is under 24-hour supervision by instructors and cadet caregivers.

Therefore there must be a concept model of a Flight Instructor who has added value to his role as a Flight Instructor. Aspects of attitude, knowledge, and general skills absolutely must be possessed by Flight Instructors. Because you see that the student who will be created is an officer and will get the title of middle expert or a diploma graduate at KKNi 5 level.

To synchronize the capabilities of a Flight Instructor equivalent to a Level 8 KKNi lecturer, we must find out more and describe it related to KKNi.

Globally, the framework aims to manage capabilities from a coordination perspective. By setting up a framework, it helps to make logical decisions and coordinate them from a broad perspective. The Qualifications Framework is the structure in which accredited qualifications are placed. This enables students, training providers, and

employers to obtain information on a broad range of qualifications equivalence. For example, the Vocational Qualifications Framework (VQF) helps create a balance of rewards between vocational and academic qualifications.

Requirements to build a National Qualifications Framework:

1. Establishment of a National Skills Authority;
2. Establishment of a Sector Education and Training Authority;
3. Establishment of a Skills Development Planning Unit;
4. Provision of an institutional framework to formulate and implement National Skills Development Policies & Strategies to develop and improve the skills of the nation's workforce;
5. Integration of National Skills Development Policies & Strategies in the National Qualifications Framework (KKN);
6. Ensure the continuous supply of demand-based and quality education and training in and for the workplace;
7. Provision of learning leading to a recognized Job Qualification;
8. Encourage workers to participate in learning boats and other training programs;
9. Increase the level of investment in National Education and Training & Skills Development through the Retribution Grant Scheme and the National Skills Fund; and
10. Provision and regulation of employment services and improvement of job prospects through training and education.

Then look at the National Qualifications Framework in the United Kingdom, The National Qualifications Framework (NQF) is a credit transfer system developed for qualifications in England, Wales, and Northern Ireland. The framework has nine levels covering all levels of learning in secondary education, further education, and higher vocational education (vocational). Although higher education academic programs (such as academic degrees) are not covered by the NQF, they are broadly aligned with the Framework for Higher Education Qualifications (FHEQ). It is only when a course has been accredited and is part of the NQF that it is eligible for state funding. As such, many courses are internationally popular and are offered by UK-based organizations, such as IGCSE. NQF is a joint responsibility of QCA England, CELLS Wales, and CCEA Northern Ireland. Scotland has its education system and its twelve-tier system, the Scottish Credit and Qualifications Framework (SCQF).

In contrast to the formal national qualifications framework, the former British colonies used another system to recognize qualifications. Wherever the person gets his training, he can go to the national ministry of education, fee the exams and take the CGLI exam which gives him a trade certificate that is recognized almost all over the world. The same was true in those days for the Cambridge School Certificate and the Higher School Certificate which gave people admission to the most prestigious universities.

From a cursory decapitation of the competency level equation with the KKNi above, it gives us an idea that this leveling guides a person to synchronize between the competencies possessed and the established national and international KKNi levels. Then instead of that, it can be used as an indicator material for the standard of a Flight Instructor equivalent to a Masters or Masters by testing the aspects that have been obtained at the IQF level. In this study, the author will compare the competencies possessed by a Flight Instructor with KKNi Level 8 or equivalent to a Lecturer who must have a Master's Degree in Education. What competencies and training must a Flight Instructor get to be equivalent to a level 8 KKNi lecturer?

Before discussing what training is required by a Flight Instructor, the author will provide an overview of the competencies possessed by a Flight Instructor. In the initial

training level, an aviator is a student pilot. This student pilot will carry out a series of training both on the ground and in the air or practice flying. As for the phase of a student pilot, the first time he will get theoretical lessons for approximately 3 (three) months then will be tested by the authorities, in this case, the Directorate of Airworthiness and Aircraft Operations who will test the students with a written exam. After going through the written exam and being declared passed, the next phase is the simulator phase. This simulator phase resembles the simulation phase before carrying out flight practice, using simulator practice tools or facilities with mobile simulator devices.

Then after going through the simulator phase and being declared eligible for the next phase, the Flight Instructor will provide a released statement for the actual practice of flying. The first phase of students entering the practice of flying is the pre-solo phase. This phase is very crucial and vulnerable once students fail to proceed to the next stage. Then the students are given a range of hours set by the university, which is 20 pre-solo flight hours. If within 20 hours they have not been able to fly their plane, then the student will be declared failed or fail for the next phase. Of course, the failed determination of a student pilot will be tested in actual practice by the Flight Instructors. There are several methods used in checking pre-solo students. One of them is a progress check and random check. Within 20 hours if a Flight Instructor sees a student making progress to fly solo, it will be released for progress check with other Flight Instructors. After seeing that it is feasible and tested and then eligible to fly alone, the Flight Instructor will release or release his protégé to fly solo. Usually, in the trend that is in API Banyuwangi, solo hours are around 10 to 15 hours. Only a few students exceed 15 hours for solo flying releases.

## **II. Review of Literature**

### **2.1. Lecturer**

According to the Law on Teachers and Lecturers (number 14 of 2005 Teachers and Lecturers), Lecturers are professional educators and scientists with the main task of transforming, developing, and disseminating science, technology, and art through education, research, and community service. In national development in the field of education, it is necessary to develop from the aspect of human resources, one of the dignified professions is a lecturer who has a very strategic function, role and position. According to Permendikbud No. 3 of 2020 concerning National Standards for Higher Education, Lecturers are professional educators and scientists with the main task of transforming, developing, and disseminating science, technology through education, research and community service.

### **2.2. Qualification**

Qualification is the mastery of learning outcomes that state their position in the KKNI (PP No. 8 of 2012 concerning the KKNI). An Indonesian National Qualifications Framework, hereinafter abbreviated as KKNI, is a competency qualification rating framework that can juxtapose, equalize, and integrate the fields of education and the field of job training and work experience in order to provide recognition of work competencies in accordance with the work structure in various sectors (PP No. 8 of 2012 concerning KKNI).

According to PP No. 8 of 2012 About KKNI Article 9 paragraph (1) The application of the KKNI in each sector or professional field is determined by the ministry or institution in charge of the sector or professional field concerned in accordance with its authority. Paragraph (2) The application of the KKNI in each sector or professional field as referred

to in paragraph (1) refers to the description of the qualification levels of the KKN I as contained in the Attachment to this Presidential Regulation. Paragraph (3) Further provisions regarding the implementation of the KKN I shall be regulated by the Minister in charge of manpower and the Minister in charge of education either jointly or individually according to their respective fields of duty.

According to the Regulation of the Minister of Manpower Number 21 of 2014 concerning Guidelines for the Implementation of the IQF, Article 5 Determination of qualification levels is carried out based on criteria for the scope of work implementation, skills and knowledge, ability to process information, responsibilities, and attitudes in carrying out a job.

Article 6 paragraph (1) Qualifications contained in each field of work in a sector and/or business field are compiled based on the business function and/or position of a business field. Paragraph (2) The qualifications contained in each field of work in a sector and/or business field as referred to in paragraph (1) are equal to the qualification level at the KKN I.

### **2.3. Lecturer Qualification**

Academic qualification is a diploma of academic education level that must be owned by a teacher or lecturer in accordance with the type, level, and formal education unit at the place of assignment. Certification is the process of providing educator certificates for teachers and lecturers. An educator certificate is formal evidence as an acknowledgment given to teachers and lecturers as professionals.

## **III. Research Methods**

### **3.1. Method of Collecting Data**

The method used in this research is using field observations, monitoring sampling teaching, interviews with Flight Instructors and Diploma III Flight Students. These three methods will provide authentic evidence between the interviewer and the actual situation at the research location (Smith, Flower, & Larkin, 2009).

The Flight Instructor criteria studied were based on flight hours, qualifications, ratings, and educational background. In this study, the subject was determined to approach the research objectives (Smith, Flower, & Larkin, 2009). There are 10 Flight Instructors who become research subjects and 30 cadets as objects of research subjects. The cadets studied were Diploma III cadets of Fixed Wing Pilots.

### **3.2. Processing and Analysis of Data**

Data processing uses a quantitative approach. The method of processing quantitative data using comparative analysis or comparative analysis is a statistical procedure that examines the differences between two or more data variables. We can use T Test, ANOVA (Analysis of Variance), MANOVA (Multivariate Analysis of Variance), ANCOVA (Analysis of Covariance), MANCOVA (Multivariate of Covariance). The purpose of this comparison method is to find out or test the differences between two or more groups so that they can determine which one is better or which one should be chosen. This technique can be done by investigating the cause-and-effect relationship and looking back for the factors that influence it.

## IV. Results and Discussion

Subject one explained the importance of synchronizing competence and KKNi level as a university lecturer. Because in addition to referring to the standards of the Ministry of Education and Culture, the competencies possessed must be coupled with the three aspects, namely Attitude, Knowledge and General Skills. So in addition to the skills possessed by Flight Instructors, they must have more values so that they are equivalent to KKNi level 8 or equivalent to Lecturers (CASR 142, 47 training center)

Subject two explained the importance of Flight Instructor competence equivalent to KKNi Level 8. In addition to being competent in teaching students to fly, Flight Instructors are also required to provide examples of good attitudes and behavior to their students according to PERPRES No. 87 of 2017 concerning Strengthening Character Education. So that students imitate and make Flight Instructor as an example or role model. Besides training to fly, students also have good attitudes, behavior and attitudes (Ruky, 2003: 104).

Subject three explained that the Flight Instructor as a subject who interacted directly with students in the teaching and learning process played a full role in improving the quality of education. Because it will affect directly to act and speak according to what is conveyed in the field. Then the third subject explains the knowledge and understanding of the competence of the Flight Instructor which will make the pattern of activities structured and accountable. Flight Instructors with students continuously meet and carry out their duties as educators who are obliged to monitor the growth and development of students towards maturity, both scientifically and behaviorally. Not only the intellectual aspects of students and carrying planes are emphasized, but they are required to shape students from aspects of attitudes, interests, emotional development and social development. (Susanto, 2002).

Subject four explained that KKNi and Flight Instructors are very important to be compared because Flight Instructors are examples for students, students will absorb all the knowledge that is given by Flight Instructors, not just flying knowledge that is emulated, attitudes will also be a concern for students. Many students imitate and make the Flight Instructor an example in the style of flying the aircraft by these students and later influences their behavior during flight. In another sense, forming the character or style of students when flying a training aircraft.

Subject five explained that the Flight Instructor which is equivalent to KKNi 8 is certainly very different from the concept of "only" a Flight Instructor. The Flight Instructor concept only has a target of students completing flight training. While Flight Instructors with KKNi level 8, they will understand not only graduating students but have more responsibilities regarding aspects of attitude, general knowledge and skills. This knowledge will later support pilot students to have a career in the world of work later and become a social community. In addition to being competent, a flight instructor who has a good attitude and character can also be a role model for students, and play a role in shaping student character. With good character, students will become qualified and ethical pilots.

Subject six stated that the KKNi Flight Instructor was very influential for students. Because a Flight Instructor is a role model for students who are taught, not only providing knowledge but Flight Instructors must also know and shape the character of their students so that they become responsible and competent people in their work later. Therefore, being a Flight Instructor is a noble and very influential job for API Banyuwangi students. So that students have the competence or ability to carry out a task, the ability to integrate knowledge, roles or tasks, personal attitudes and values, skills, and the ability to build skills, knowledge based on previous experience and learning (Robert A. .Roe, 2001).

Subject seven explained that the KKNi Flight Instructor for prospective pilot students is of course very important, because the Flight Instructor is an example for students on how to become a pilot both in theory and practice. Flight instructors who have an KKNi 8 standard will have a more varied flying experience, so that it becomes a lesson for students as students the embodiment, expression, and representation of the main motives, knowledge, attitudes, behaviors in order to be able to carry out work, especially in emergency conditions and to deal with it very well or to be able to distinguish between average performance and extraordinary performance. This approach is seen from an individual point of view (Susanto, 2002).

Subject eight explained that a Flight Instructor with the equivalent of KKNi level 8 is very important in the world of aviation education, because with an upgraded competency equivalent to level 8, the KKNi will score an excellent AB initio Diploma III. They are AB initios not just jobs after graduation, but with more competencies that can improve safety for students who are studying. Because with extensive knowledge, it can increase awareness when flying practice is in progress. It will be beneficial for the individual and the organization he occupies.

Training is an absolute thing in the aviation world, especially mandatory training, this can refer to CASR 142 regulations, where the training is specifically to add value to knowledge in civil aviation. A regulations in the safety management system also explain that risk management can be carried out with training and experience will affect better safety (CASR Part 19, safety management system).

For students who have been taught approximately 150 flight hours, a flight test will be carried out by a senior Flight Instructor who has a Designated Pilot Examiner's (DPer) certification issued by the DGCA. After the internal test by the company, the next stage will be a flight evaluation, if it meets the standard it will be submitted to an external examiner, if it does not meet the standard, an additional matriculation will be given and if necessary, additional flight hours. In this case The Directorate of Airworthiness and Aircraft Operations, the Directorate General of Civil Aviation has the authority as a regulator to test flights from external parties and issue pilot permits if they pass the flight test.

From the facts above, Flight Instructors must be able and competent to teach and realize students who initially could not fly an airplane to become able to with the quality and standard requirements of the class rating taken by student pilots, Crosby (1979). To realize students with quality competency standards, an approach to the transformation of a quality culture is carried out. From this quality culture, a commitment emerges from a flight instructor, which is to protect company assets in the form of the safety of other people and aircraft and then maintain the safety of flight students (Ivancevich, Konopaske, & Matteson, 2005).

## V. Conclusion

Job training carried out in Indonesia at each qualification level at the IQF includes processes that build the character and personality of Indonesian people as follows:

1. Fear God Almighty;
2. Have good morals, ethics and personality in completing their duties;
3. To act as citizens who are proud and love their homeland and support world peace;
4. Able to work together and have high social sensitivity and concern for society and the environment;

5. Appreciate the diversity of cultures, views, beliefs, and religions as well as the original opinions/findings of others;
6. Uphold law enforcement and have the spirit to put the interests of the nation and the wider community first.

According to PP No. 8 of 2012 concerning KKNi Article 2 paragraph 2 describes the qualification levels consisting of:

- a. level 1 to level 3 are grouped into operator positions;
- b. level 4 to level 6 are grouped into technician or analyst positions;
- c. Levels 7 to 9 are grouped into expert positions.

According to Article 5, it explains that Diploma 3 graduates are at least equivalent to level 5, this is in accordance with the graduates of API Banyuwangi Diploma III Pilot Students. Then article five also explains that graduates of professional education are equivalent to level 7 or 8. Article 6 of PP 8 of 2012 explains the Equalization of Learning Outcomes resulting from job training with qualification levels at the KKNi consisting of:

- a. operator-level job training graduates equivalent to levels 1, 2, and 3;
- b. graduates of technical/analyst level job training equivalent to levels 4, 5, and 6;
- c. graduates of expert level job training equivalent to levels 7, 8, and 9.

In Article 7 PP No. 8 of 2018 explains the criteria of Article 7 paragraph (1) Equalization of learning outcomes generated through work experience with qualification levels at the KKNi taking into account the field and length of work experience, level of education and job training that has been obtained.

Paragraph (2) length of work experience as referred to in paragraph (1) is determined by each sector or sub-sector.

#### Level 8

1. Able to develop knowledge, technology, and/or art in their scientific field or professional practice through research, to produce innovative and tested works;
2. Able to solve the problems of science, technology, and/or art in the field of science through an inter or multidisciplinary approach;
3. Able to manage research and development that is beneficial to society and science, and is able to gain national and international recognition.

From the conclusion above, with the institutional transformation of the Banyuwangi Indonesian Aviation Academy from the previous education and training institutions, it is necessary to develop various aspects. One of them is the Human Resources teacher. Previously, if you wanted to become a flight instructor, you only had to have a Flight Instructor certificate by turning into a university, you had to change according to university standards, namely to become a lecturer who has the competence of a flight instructor.

To become an Aviation Lecturer, therefore if you do not have a Minimum S2 Education according to Permendikbud No. 3 of 2020 concerning SN Dikti, the Competencies possessed by Flight Instructors absolutely must be adjusted. Competency adjustments must be in accordance with the KKNi for Lecturers, namely KKNi Level 8.

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