

Curriculum Development is Conducted to Improve Competencies of Air Transportation Management Study Program for Cadets of Aviation Polytechnique Surabaya

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ABSTRACT

The purpose of this study is to provide an analysis of the effect of curriculum development on air transportation management competencies by contributing to cadets at Surabaya Aviation Polytechnic. The design of this study uses quantitative research methods that emphasize numerical data analysis such as collecting data to the appearance of results. The population in this study were cadets in Surabaya Aviation Polytechnic as many as 96 cadets. The operational definition is carried out to measure and see the dimensions of behavior, aspects, or nature in which this research uses curriculum development which is measured based on several indicators, namely the principle of relevance, the principle of flexibility, the principle of continuity, the principle of efficiency, and the principle of effectiveness. Besides, there are management competencies that are measured in several indicators such as work skills, work knowledge, work attitudes, and morale at work. Primary data is the source of data from this research in the form of data collection using a questionnaire. The data analysis technique used is linear regression analysis with the help of the SPSS for the windows computer program in the acquisition of its calculation results. The results show that there is a significant influence between curriculum development on air transportation management competencies wherein curriculum development is stated to be very important in improving competence. The curriculum becomes a guideline because it contains material, objectives, methods, and time allocation regarding air transportation management competencies possessed by Surabaya Aviation Polytechnic cadets.

Keywords: Curriculum, Air Transportation Management Competence, Air Transportation Management

1. INTRODUCTION

The curriculum is a set of plans about teaching and the ability for planning effective curriculum, it is an important skill for all teachers. The curriculum must help students to develop habits by giving proper teaching strategies for learners and they must be supported by time availabilities [1]. In the educational field, when the curriculum fails to give adequate skills and competencies of air transportation managerial competencies for learners, human resources are impossible to increase to higher developmental levels [1].

Curriculum assessment and evaluation based on air transportation managerial competencies are ones of important components because factually, they are ones that give validity guarantees of all processes conducted in implementational steps. Therefore, assessment quality is very important to prepare competent graduates [2]. Naydenova explained that air transportation managerial competencies are manifested through each action in the context of certain practical activities based on acquisitions from complexes of pieces of knowledge, skills, experiences, and someone's law prerogative rights in limited areas [3]. Furthermore, Burke in Tsankov [4] explained that therefore, concepts of air transportation managerial competencies are related to the abilities for functional performances in professional environments by showing attitudes that meet the requirements.

These research original contributions are seen from the research that used air transportation managerial competency developments based on curriculum [5]; Wang explored purpose integration for learning air transportation managerial competencies [6]; curriculum in communication air transportation management competency developments [1]; then Tsankov researched the skills and knowledges that become bases of transversal air transportation managerial competency foundations [3]; Transportation managerial competencies of elementary school teachers in applying curriculum [7]; Sune and Urquiza analyzed curriculum based on air transportation managerial competencies [8]; Wang conducted the research about the curriculum changes for future air transportation managerial competency management [6]; then Yuan et al researched about professional knowledges and teacher air transportation managerial competencies [2]; Kanyonga et al researched curriculum implementation based on air transportation managerial competencies [2], whereas Ningtiyas and Jailani only focused on pedagogy air transportation management

competency developments [9]. So, in this research, it is chosen curriculum development to improve air transportation managerial competencies of cadets. The contribution in this research is by this research, so it will help Aviation Polytechnique Surabaya to apply the proper curriculum to help air transportation managerial competency developments of cadets.

2. METHOD

2.1. Research Design

Research design is a plan for how some research is conducted by using certain methods. The research method is a procedure conducted to be able to understand some research objects that will guide the research about how the research orders are conducted and they also involve techniques and procedures used in the research. In this research, the researcher uses a quantitative research method. The research by quantitative approach emphasizes on the analysis in numerical data from data collection and also performances from the results [10].

2.2. Population and Sample

The population consists of all subjects that become the research focus, and all research subject members who have characteristic similarities [11]. The population in this research consists of cadets in Aviation Polytechnique Surabaya as 96 people. The sample is part or representative of the population researched. In this research, the sample collection technique taken is a surfeited sampling technique [10], i.e. sample determination technique if all population members are used as samples [12]. Therefore, the samples used in this research are 96 cadets in Aviation Polytechnique Surabaya.

2.3. Definitions of Variable Operation

An operational definition is one concept or something that can be measured and can be seen in dimensions of attitudes, aspects, or characters shown by the concept. So, the variable operational definitions in this research are:

2.3.1 Curriculum Development

Curriculum development in this research is measured through several indicators, they are:

- a) Relevancy principles
- b) Flexibility principles
- c) Continuity principles
- d) Efficiency principles
- e) Effectivity principles

2.3.2 Air transportation management competencies

Air transportation management competencies in this research are measured through several indicators, they are:

- a) Performance skills
- b) Performance knowledge
- c) Performance attitudes
- d) Performance morals

2.3 Data Types and Sources

The data sources used in this research are primary data. Primary data are gotten by questionnaire instruments

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2.5. Data Collection Method

The data collection method is a systematic procedure by caring about hatching that has been determined. The method used for getting the data required are by using questionnaires. A questionnaire is a list that contains a set of questions arranged by the researcher to be filled by respondents such as written questions for asking for notes or answers and information required [13].

2.6. Data Analysis Technique

The data analysis technique used is the linear regression analysis. The regression analysis is used to test how are the influences of each independent variable (X) toward the dependent variable (Y) formulated in the similarity form as follows:

$$Y = a + bX$$

Y = Dependent variable
 X = Independent variable
 a = Intercept
 b = Regression coefficient (slop).

3. RESULTS AND DISCUSSION

3.1. Instrument Test

3.1.1 Validation Test

Validity test for variables of Curriculum Development toward air transportation management Competencies uses a statistical test

of Corrected Item Total Correlation. The criteria are said as valid if the value of sig is smaller than 0,05 [13].

Table1. Validity Test

Variable	Statement	R _{calculation}	Sig	Conclusion
Curriculum development (X)	X ₁₁	0,772	0,000	Valid
	X ₁₂	0,677	0,000	Valid
	X ₁₃	0,627	0,000	Valid
	X ₁₄	0,823	0,000	Valid
	X ₁₅	0,718	0,000	Valid
Air transportation Competencies (Y)	Y ₁	0,653	0,000	Valid
	Y ₂	0,648	0,000	Valid
	Y ₃	0,551	0,000	Valid
	Y ₄	0,712	0,000	Valid

Based on table 1, it is known that each indicator in variables of Curriculum Development and air transportation management Competencies has the value of sig smaller than 0.05, so each indicator used in Curriculum Development and Air transportation management Competencies is stated as valid.

3.1.2 Reliability Test

A construct reliability test is conducted to measure the construct, it is reliable or not [16]. It is said as reliable if Cronbach Alpha is > 0,6. The results of the reliability test are as follows:

Table 2. Reliability Test

Variable	Cronbach Alpha	Alpha	Conclusion
Curriculum Development (X)	0,776	0,6	Reliable
Air transportation management competencies (Y)	0,663	0,6	Reliable

Based on table 2 above, it shows that the results of the reliability test of all indicators from the independent variable and dependent variable show as reliable, because the all values of C than 0.6, so it is stated that all indicators are reliable

3.2. Data Analysis

3.2.1 Linear Regression Analysis

Based on the results of data processing calculation by SPSS program computer aid for windows, so it is achieved the linear regression similarities in Table 3.

Table 3. Results of Linear Regression Analysis

Variable	B	Std.Error
(Constant)	1,938	0,191
Curriculum Development	0,523	0,049

Based on the calculational results above, so it is achieved significant double linear regression similarity as follows:

$$Y = 1.938 + 0,523 X_1 + \dots e$$

In which :

Y = Air transportation management competencies

X = Curriculum Development

From the calculational results of SPSS 24 above, so it can be concluded that Constant 1.938 that shows the total variable of air transportation management competencies influenced by the variable of Curriculum Development, or the independent variable is = 0, so the value of air transportation management Competencies is 1.938, by the assumption that other variables are constant.

The variable of Curriculum Development has the value of 0.523, it means if the variable of Curriculum Development increases as one unit, so it will add air transportation management Competencies as 0.523 unit. The value is above zero, it means that it has a positive value, so the higher the Curriculum Development, so the higher the air transportation management Competencies.

3.2.2 Hypothesis Test

For testing the hypothesis, it is used t-test that shows influences partially from each independent variable toward the dependent variable.

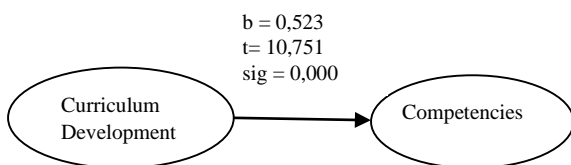


Figure 1. Research Model

Based on the analysis results, it shows that there are significant influences between Curriculum Development toward Air transportation management competencies. This case shows that curriculum development is very important to improve air transportation management competencies of cadets in Aviation Polytechnique Surabaya. The results in this research support the

research found that educational and training curriculum applications can improve air transportation management competencies [2]. These results are also parallel with other researchers who used curriculum applications as teacher instruments in directing teaching focus for helping in developing main air transportation management competencies of students [5].

Especially, the applied curriculum development is for improving air transportation management competencies. In the educational field, when the curriculum fails to give adequate skills and competencies of air transportation management for learners, human resources is impossible to increase to higher developmental levels [1]. In other research discussed curriculum implementation to meet communication air transportation management competency standards [1].

The curriculum is a guide that contains materials, purposes, methods, and time allocations, in other words, the curriculum will contain about air transportation management competencies that will be resulted in learning and they are owned by the graduate students after certain time programs. Therefore, because it is a framework for going to air transportation management competencies of the graduates, so curriculum program must be adjusted to the air transportation management competency needs of users.

Curriculum development that can serve the diversity of human resource abilities, student abilities, learning tools, and culture in the area of curriculum development guarantees quality educational outcomes that can shape a peaceful, democratic and competitive Indonesian society to advance. Curriculum development is a demand for education decentralization. In the context of decentralization and in line with the realization of equitable quality education outcomes, a curriculum that contains general competencies of graduates is needed that can be accounted for in local, national, and global contexts. This general competency must be mastered by students throughout Indonesia.

The implications of this research directly affect the curriculum that will be used by an educational institution especially aviation polytechnic. A good analysis will give an idea of how the curriculum is suitable for creating cadets that suit the needs of graduate users. In general, the curriculum is a producer of aviation polytechnic, while the public is the consumer. Of course between producers and consumers, there must be synchronous. The curriculum as its output must be able to link and match the needs of the community. The curriculum of an educational institution also functions for the public and the users of the graduates concerned. By

knowing the curriculum of a school, the community, as users of graduates, can carry out at least two of the following types, which are contributing to facilitate the implementation of educational programs that require collaboration with parents and the community. Participate in providing constructive criticism and suggestions for perfecting education programs in schools, so that they are more compatible with the needs of the community and employment.

4. CONCLUSION

Based on the analysis results achieved by using linear regression analysis, it can be known that there are significant and positive influences between curriculum development and air transportation management competencies. This case shows curriculum development to important to be conducted to create better air transportation management competencies, so the graduates can have competitions toward human resources from many countries.

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