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# DEVELOPMENT OF A BLENDED LEARNING MODEL TO INCREASE CADET LEARNING MOTIVATION AT MAKASSAR AVIATION POLYTECHNIC

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**Abstrack:** The model can be used as an alternative learning model that can meet learning development and improve cadet competence. The type of research used is Research and Development (R & D), the development of learning models in this study is a combination of models (1) Plomp (1997), (2) Dick & Carey (2005), and Joyce et al (2004). The Plomp model was used for the research and development phase of the model, Dick & Carey for instructional design, and Joyce et al for the contents of the model. The instrument used is valid, where the criteria used have an adequate degree of validity if the Va value is in the minimum valid category, so it is suitable for use while the level of reliability of the instrument using the percentage of agreements (PA) with instrument sheet criteria is said to be reliable if the PA value ≥ 0.70. The results of this study show that the development of the blended learning model developed meets valid, practical and effective criteria to increase cadet learning motivation in learning both in individual and group discussion activities.
**Keywords**: Blended Learning and Motivation.

## I. INTRODUCTION

The development of the world of education continues to change significantly so that many change the mindset of educators, from the mindset of ordinary and rigid educators to more modern. Government Regulation of the Republic of Indonesia Number 57 of 2021 concerning National Education Standards states that education is a conscious and planned effort to create a learning atmosphere and learning process so that cadets actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed by themselves, society, nation and state. Based on the Regulation of the Minister of Transportation Number 48 of 2019 concerning the Organization and Work Procedures of the Makassar Aviation Polytechnic, the Makassar Aviation Polytechnic (Poltekbang Makassar) is a technical implementation unit (UPT) of the Transportation Human Resources Development Agency which has the task of

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organizing Vocational Education, Research, and Community Service in the field of aviation and Air Transportation Training. Based on the preliminary data obtained, the motivation of cadets of the Makassar Aviation Polytechnic Air Traffic Management study program Batch IX Alpha and IX Bravo in learning Air Traffic Services is still very low. Cadets who ask and answer questions from lecturers during learning, on average in one class only one to two people dare to ask the lecturer. One of the reasons is still the lack of cadets who actively think, lack of motivation in seeking information from various sources and there are still many cadets who feel afraid or reluctant to their friends if they want to ask. Wihartini, K (2019), The blended learning model can be used in the learning process to improve student learning outcomes, increase student learning motivation and foster critical thinking skills in students.

Based on the background above, it can be concluded that the Blended Learning learning model is effective in increasing cadet learning motivation and improving cadet learning outcomes. Therefore, the Blended Learning learning model needs to be developed and integrated in learning for cadets.

## B.METHODS

This type of research includes Research and Development (R&D) research. According to Sugiyono (2016), Research and Development (R&D) is a research method used to produce certain products and test the effectiveness of these products. This research uses components of the Research and Development (R&D) approach model. The development of learning models in this study is a combination of models (1) Plomp (1997), (2) Dick & Carey (2005), and Joyce et al (2004). The Plomp model was used for the research and development phase of the model, Dick & Carey for instructional design, and Joyce et al for the contents of the model. The data collected in this study is in the form of quantitative and qualitative data, the data provides information or an overview of the validity, practicality, and effectiveness of the learning model.

The subjects in this study were cadets of the DIII Air Traffic Study Program, Air Traffic Management Force IX Alpha and IX Bravo with a total of 47 cadets, while the object in this study was the implementation of a Blended Learning learning model in Air Traffic Services (ATS) subjects to increase cadet activity.

## C.RESULTS AND DISCUSSION

The initial rarity of this study is the initial investigation carried out as an effort to find out the initial circumstances that occurred in the research subjects. Furthermore, the realization of models, devices and instruments is carried out. Before being tested, all instruments, and guidelines for blended learning models, as well as learning tools have been validated by experts & practitioners according to their expertise. After the validation stage, the activities carried out are individual trials, small group trials (limited trials ) and expanded trials (field trials). a. Preliminary Investigation The initial investigation phase is carried out through the

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collection of information on: identification of learning objectives and analysis, cadet characteristics, and learning problems. b. Realization of the Realization Model is carried out based on the results at the pre-development stage (initial investigation), then reviewed again to Directed at the realization of prototypes: (1) Guidelines for the Blended Learning Learning Model; (2) learning tools; and (3) instruments. c. Validation The next stage after design and realization is the validation stage. The validation stage aims to determine the feasibility of instrument validation, blended learning model guidelines. The instruments used in the development of blended learning models are assessed for feasibility by Experts/Validators. The feasibility assessment of each instrument is reviewed based on 3 (three) aspects, namely: Instructions for use, material (content), and language. The results of the summary instrument feasibility assessment are presented in Table 1.

Tabel 1 Hasil Kelayakan Instrumen

| No. | Jenis Instrumen | Validitas | | Realibilitas | |
|---|---|---|---|---|---|
| | | Va | Kriteria | PA | Kriteria |
| 1. | Lembar validasi instrumen penilaian model pembelajaran *blended learning* | 0,92 | Sangat Valid | 0,70 | Reliabel |
| 2. | Lembar validasi instrumen aktifitas taruna | 0,92 | Sangat Valid | 0,73 | Reliabel |
| 3. | Lembar validasi instrumen Rencana Pembelajaran Semester (RPS) | 0,81 | Sangat Valid | 0,75 | Reliabel |
| 4. | Lembar validasi instrumen Materi Ajar | 0,82 | Sangat Valid | 0,71 | Reliabel |
| 5. | Lembar validasi instrumen angket respon taruna terhadap model pembelajaran | 0,86 | Sangat Valid | 0,86 | Reliabel |

Referring to the data in Table 1, it can be stated that all instruments are very valid, where the criteria used have an adequate degree of validity if the Va value is in the minimum valid category, so it is suitable for use While the level of reliability of the instrument using the percentage of agreements (PA) with sheet criteria The instrument is said to be reliable if the PA value ≥ 0.70. Referring to table 4.1 it can be stated that all instruments are reliable. Thus, the instrument can be used to collect data on the validity, practicality and effectiveness of blended learning models.

The learning device sheet created is one of the supporting components of the blended learning learning model. Therefore, before trialing learning tools must be validated by experts and practitioners. Learning device validation validation activities are carried out by providing manuscripts (learning implementation plans, teaching materials and learning outcome competencies) along with validation sheets to validators as many as 3 (three) respondents. The summary data of validator assessments of learning tools are presented in Table 2.

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Table 2 Learning Device Validation Results

| No. | Aspek yang dinilai | Hasil Penilaian | | | _ | Kriteria |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | | |
| 1. | Pendahuluan | 1.00 | 0.50 | 1.00 | 0.83 | Sangat Valid |
| 2. | Isi model pembelajran *blended learning* | | | | | |
| | a. Identifikasi masalah | 0.83 | 0.83 | 0.83 | 0.83 | Sangat Valid |
| | b. Struktur dan Komponen Model | 1.00 | 1.00 | 1.00 | 1.00 | Sangat Valid |
| | c. Kelengkapan Model | 0.80 | 1.00 | 0.80 | 0.87 | Sangat Valid |
| | d. Sintaks Model | 0.83 | 1.00 | 1.00 | 0.94 | Sangat Valid |

Based on the data in Table 2, it can be stated that all learning devices meet the valid criteria. Validation of blended learning model guidelines before trialing, carried out by experts and lecturer practitioners. Validation activities are carried out by providing manuscripts (blended learning model guidelines) along with validation sheets to validators A summary of validator assessment results against blended learning model guidelines is presented in Table 3.

Table 3 Validation Results of Guidelines Blended learning model

| No. | Aspek yang dinilai | Hasil Penilaian | | | _ | Kriteria |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | | |
| 1. | Pendahuluan | 1.00 | 0.50 | 1.00 | 0.83 | Sangat Valid |
| 2. | Isi model pembelajran *blended learning* | | | | | |
| | a. Identifikasi masalah | 0.83 | 0.83 | 0.83 | 0.83 | Sangat Valid |
| | b. Struktur dan Komponen Model | 1.00 | 1.00 | 1.00 | 1.00 | Sangat Valid |
| | c. Kelengkapan Model | 0.80 | 1.00 | 0.80 | 0.87 | Sangat Valid |
| | d. Sintaks Model | 0.83 | 1.00 | 1.00 | 0.94 | Sangat Valid |

Based on the data in Table 3, it can be concluded that the guidelines for the blended learning model are very valid. As a continuation of the validation results against the initial prototype of the blended learning learning model, learning tools. The next step is to conduct a series of trials (empirical validation) to test that the results of expert and practitioner validation of the blended learning model developed are supported by empirical data in the field. Through a series of trials, information will be obtained about the practicality and effectiveness of the blended learning model developed. Trial activities in this study were carried out 3 (three) times, namely individual trials, small group trials (limited trials), and expanded trials (field trials). The development of a blended learning model is adjusted to the principles and characteristics of learning at the Makassar Aviation Polytechnic. Based on the validity test, a blended learning model is obtained, which meets the validity criteria. Theoretically and empirically, blended learning models meet practical criteria. Theoretically, the results of expert and practitioner assessments state that the blended learning model can be applied. Meanwhile, empirically the results of the trial show that the blended learning model meets practical criteria in terms of implementation indicators in managing learning. These results, in accordance with

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the opinion of Nieveen (1999) who stated that practicality is associated with two things, namely: (1) whether experts and practitioners state that the learning material developed can be applied; and (2) in real terms in the field, the learning materials developed can be applied. With the practicality of this blended learning learning model, cadets actively follow learning steps that are in accordance with the syntax of the blended learning learning model. In addition, there is an increase in discussion activities both individually and in groups, analyzing information, being creative in solving problems, creating a way to solve problems, and the use of varied learning resources.

## D. CONCLUSION

The blended learning model at the Makassar Aviation Polytechnic meets the practical criteria shown by the implementation of the blended learning model and cadet activities in learning to manage learning. The practicality of the blended learning model can increase tauna learning motivation in learning both in individual and group discussion activities.

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