The Relationship of Public Speaking Competencies of Lecturers to Problem Solving Ability and Learning Outcomes of Cadets

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Abstract— **Interest in learning is a very important aspect of learning. However, to increase cadets' interest in learning in the classroom, educators need to implement interactive learning strategies. One of the important aspects of building interactive learning is interactive communication. To build interactive communication, educators need to have good public speaking skills. Even in this all-digital era, where technology is growing, conventional learning is slowly shifting to e-learning, educators must still have good public speaking skills. However, very few previous studies have discussed the public speaking skills of educators, especially the difficulties experienced by educators in public speaking. In fact, skills in public speaking are important things that must be possessed by an educator in carrying out learning in the classroom. This study aims to find out the relationship between public speaking skills when teaching and find out how to solve cadets' problems and notify the results of their learning. The author uses a quantitative approach and is carried out at the Surabaya Aviation Polytechnic**

Keywords— *Problem solving, Public speaking, Learning process*

I. INTRODUCTION

Interest in learning is a very important aspect of learning. When cadets have a high interest in learning, it is easier for educators to deliver material. In addition, the high interest in learning will increase their attention in learning (Kayalar & Ari, 2017; Lin & Huang, 2016), and will have a positive influence on learning outcomes (Isnani, 2017). The focus of the cadets in following the learning process will increase because they have an interest that comes from themselves. However, to increase cadets' interest in learning in the classroom, educators need to implement interactive learning strategies. Interactive learning strategies can increase interest and pleasure in the scientific learning process (Milner-Bolotin et al., 2007).

One of the important aspects of building interactive learning is interactive communication. The purpose of interactive communication is to build good communication so that the goal of the communication itself is achieved, that is, conveying the message clearly. Thus, educators can create a learning process that runs well and successfully (Subandi et al., 2018). To build interactive communication, educators need to have good public speaking skills. In addition, public speaking skills can support success as educators as well as motivators in learning for students (Trimastuti et al., 2021).

Currently, public speaking is one of the must-have skills in the global era. Technology that is developing so rapidly requires individuals to have good communication. With good public speaking skills, individuals can compete to improve their quality (Girsang, 2018). In the world of education, educators are also required to have good public speaking skills in order to improve their quality. Educators who have good communication will be successful in delivering material in the classroom. Educators with good communication always make things easier to understand (Khan et al., 2017). Therefore, public speaking skills allow educators to have good communication during the learning process. In addition, educators who have good communication tend to be able to increase student motivation towards their learning process (Dalal, 2015).

In an earlier study (Tarsinih & Juidah, 2021) revealed that the public speaking skills of students of Indonesian study program are still relatively low. Another study (Mitha et al., 2018) on student anxiety in public speaking also showed that 82% of students experience anxiety in public speaking. Then another study (King, 2017) also showed that 75% of students agreed that they were afraid to speak publicly. This shows that there are still many students who have anxiety and fear in public speaking. In research Nisaa & Naryoso (2018) revealed that students have 64% of the variants of factors that cause fear in public speaking. This illustrates that students also have diverse difficulties in public speaking. However, very few previous studies have identified the difficulties experienced by educators in public speaking. In fact, skills in public speaking are important things that must be possessed by an educator in carrying out learning in the classroom. Of course, obstacles and challenges will arise when educators apply their public speaking skills in the classroom. Based on these reasons, the author here tries to reveal the obstacles in public speaking faced by educators during the teaching process. In addition, it is very important to know how educators overcome the obstacles they have encountered. So, the author will also analyze how educators overcome obstacles in public speaking that they encounter when teaching.

II. METHOD

In this study, Case studies are used to answer problem formulations. Case studies can be defined research that explores the programs, events, activities, or processes of one or more individuals in depth, which are limited by time and place (Creswell, 2003). Like the research objectives in this study, the authors wanted to find information about the relationship of public speaking to solving cadet problems. Therefore, the author needs the right study design for the purpose of this research in order to explore a case or problem in a location or individual in depth. The case study is a very

appropriate research design for this study.

Furthermore, Case studies can also be defined as empirical research methods used to investigate a phenomenon, focusing on the dynamics of cases in real-life contexts" (Teegavarapu et al., 2008). This is like what happened inside the Surabaya Aviation Polytechnic campus where after preliminary research or preliminary research, there is a public speaking relationship between lecturers and cadets. This phenomenon really needs to be investigate

the Surabaya Aviation Polytechnic is the ease of access to meet participants. The willingness of participants is the basic reason why the author chose Taruna at the Surabaya Aviation Polytechnic

III. RESULTS AND DISCUSSION

The data in this study comes from primary data in the form of a questionnaire submitted to the Cadets of the Surabaya Aviation Polytechnic, Aircraft Engineering Study Program. Next, the validation of the Lecture Event Unit is as follows.

TABLE I. VALIDATION OF LECTURE EVENT UNITS

No	Indicators	Validator Test Results 1	2	3	4	Percentage
A. RPS Identity						
1.	The name of the school is clearly written				√	100%
2.	The name of the study program is clearly written				√	100%
3.	The course name is clearly written				√	100%
4.	Semster/SKS is clearly written				√	100%
5.	Clearly written subject matter				√	100%
6.	Time allocation according to the organization of the material				√	100%
B. Core Competencies						
7.	Conformity of core competencies to the curriculum				√	100%
8.	Core competencies are clearly written and complete				√	100%
C. Basic Competencies						
9.	KD formulation in accordance with Core Competencies				√	100%
10	Basic competencies are clearly written and complete				√	100%
D. Indicators						
11	Indicators of attitudes, knowledge and skills according to KD				√	100%
12	Indicators formulated in operational verbs				√	100%
E. Learning Objectives						
13	Learning objectives using the ABCD *(Audience, Behavior, Condition, Degree)* format; and			√		75%
14	Formulation of goals in accordance with indicators				√	100%
F. Subject Matter						
15	Correctness of the substance of the material/content				√	100%
G. Learning methods						
16	Suitability of learning methods with the subject matter				√	100%
17	The learning method corresponds to the allocation of time.				√	100%
H. Learning Activities						
18	Clarity of learning scenarios (the steps of learning activities consist of the beginning, core and closing according to the syntax)				√	100%
I. Assessment Techniques						
19	The assessment rubric is clearly written			√		75%
20	Instruments are covered with assessment rubrics			√		75%
Average						**96,25%**

because apart from getting information about it, there is still very little previous research that has focused on educators regarding public speaking skills. By applying case studies, the author hopes to obtain useful information for educational development.

The participants of this study were Cadets in the Surabaya Aviation Polytechnic. The author chooses Cadets from the Aircraft Engineering Study Program in the English language course. The reason why the author chose Taruna at

From table 1, we can know the percentage results obtained from the Lecture Event Unit of 96.25%, this percentage is in the very good category, but there are some minor notes from experts so that the Lecture Event Unit needs to be followed up by revising the suggested section, namely adjusting learning objectives and providing examples of assessment rubrics. Next validation of Public Speaking is as follows.

TABLE II. RESULT OF THE CADET PROBLEM SOLVING ABILITY QUESTIONNAIRE

Aspects	Item No.	Indicators	Result 1	2	3	4	Percentage
Troubleshooting Capabilities	1	Panic while doing *Public speaking*			35	10	**81,67**

2	Lack of confidence when doing *Public speaking*	30	15	**85,00**
3	Nervousness when doing *Public speaking*	20	25	**90,00**
4	Lack of mastery of the material when doing *Public speaking*	25	20	**87,22**
5	Forgetting a few words while doing *Public speaking*	20	25	**90,00**
6	Can't speak loudly	30	15	**83,33**
7	Performace Less attractive when doing *Public speaking*	30	15	**83,33**
8	Can't answer audience questions appropriately	24	21	**81,67**

From table 2 The acquisition of data on the problem solving ability of cadets in the panic aspect gets 81.67%, in the aspect of lack of confidence gets 85%, in the aspect of Nervousness gets 90%, in the aspect Less mastering the material gets 97.22%, the aspect of Forgetting some words 90%, not speaking loudly 83.33%, Less interesting 83.33, and unable to answer the audience as much as 81.67%. In this case, the cadets' ability to solve *public speaking* problems is also related to psychomotor and cognitive learning outcomes shown in table 3 below.

TABLE III.   RESEARCHER'S STUDY OF COGNITIVE AND PSYCHOMOTOR BILITIES

Variabel		n	Kelompok	Mean	P value
Kognitif	Pretest	40	Intervensi Kontrol	66.75 64.25	0.423
	Postest	40	Intervensi Kontrol	77.50 66.25	0.000
Afektif	Pretest	40	Intervensi Kontrol	76.70 76.65	0.176
	Postest	40	Intervensi Kontrol	81.22 76.80	0.000
Psikomotor	Pretest	40	Intervensi Kontrol	64.50 64.50	0.983
	Postest	40	Intervensi Kontrol	77.87 71.62	0.000

From table 3, we can know that cognitive and psychomorphic abilities use cadets when conducting public speaking with *a* p value of 0.423 > 0.05 and after an intervention the *p value* of 0.000 < 0.05, this leads to a significant change where in the control class using *direct learning* methods and in the intervention class using PjBL, then for psychomotor abilities obtained through test *results Mann-Withney* in the intervention group (experimental) and control class obtained results before the intervention with a p value of 0.983 > 0.05 and after the intervention *a p value* of 0.000 < 0.05, this leads to a significant change because with PjBL it is more demanding for students to be active and practice problem-solving skills, communication skills and provide experience to students to be able to improve cognitive abilities and his psychomotor.

IV.   CONCLUSION

Based on the descriptions and results of data analysis that have been stated in the previous chapter, the conclusions obtained from the research entitled "The Relationship of Public Speaking Competencies of Lecturers to Problem Solving Abilities and Learning Outcomes of Cadets".

It can be known that public speaking is effective in improving public speaking skills at the Surabaya Aviation Polytechnic Cadets. Public speaking is able to improve a person's individual skills when speaking in public, such as being able to think spontaneously, improving vowels so that they have a microphonic voice, and being able to get used to speaking without relying too much on text.

Public speaking activities increase self-charisma. Of course, this is very necessary for a public speaker, how he is able to make others (audience) amazed to see himself, and is able to make people think that a public speaker is a great and intelligent person, a competent person, and makes people feel comfortable with their self-charisma.

Public speaking activities have a positive effect on cadets, especially in terms of self-control when they are speaking in public. Public speaking routines carried out at the Surabaya Aviation Polytechnic such as presenter lessons, English speeches, class presentations do have a good effect on them when speaking in public.

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