



CORRELATION OF THE LEARNING ACHIEVEMENTS IN MICROTEACHING AND FIELD EXPERIENCE PROGRAM TO PREPAREDNESS TO BECOME TEACHERS OF THE STUDENTS OF THE STUDY PROGRAM OF MECHANICAL ENGINEERING EDUCATION OF THE CLASS OF 2012.

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KEYWORDS

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ABSTRACT

The objectives of this research are to investigate: (1) the correlation between the learning achievement in Microteaching and the preparedness to become teachers of the students of the Mechanical Engineering Education of the Class of 2012; (2) the correlation between the learning achievement in Field Experience Program (PPL) and the preparedness to become teachers; (3) the correlation of the learning achievements in Microteaching and PPL to the preparedness to be teachers. Its population was all of the students as many as 69 of the Mechanical Engineering Education, the Class of 2012. The number of the samples of research was determined by using the simple random sampling technique. They consisted of 58 students. The data of research were collected through documentation for the variables of learning achievements in Microteaching and PPL and questionnaire for the variable of preparedness to become teachers. The data of research were analyzed by using the partial correlation analysis and multiple regression analysis at the significance level of 5%. The results of research show that (1) there is a positive and significant correlation between the learning achievement in Microteaching and the preparedness to become teachers; (2) there is a positive and significant correlation between the learning achievement in PPL and the preparedness to become teachers; and (3) there is a positive and significant correlation of the learning achievements in Microteaching and PPL to the preparedness to become teachers.

INTRODUCTION

Education is closely related to teaching and learning process. The teaching and learning process is at the core of the overall educational process with the teacher as the primary role holder (Usman, 2013, p.4). According to (Asril 2015, p.3) as for the purpose of teaching is the formulation of abilities and behaviors that are expected to be possessed by learners after the teaching is finished. To achieve that goal, one that must be considered by a teacher is to have maturity, abilities and skills in teaching. Skills in teaching aims to improve the quality in the learning process.

To improve the quality of education, the graduates of the Institute of Teacher Training (LPTK) is required to have the ability and competence in carrying out their duties as educators or teachers. Faculty of Teacher Training and Education (FKIP) Sebelas Maret University (UNS) that has a vision to become a Institute of Teacher Training (LPTK) that produces and develops educators with strong character and intelligency. To become an educator ones not only have to possess a broad knowledge but also a role model- attitude, trustworthy, honesty, being able to think and act intelligently. Therefore, the readiness of students to become teachers is not only measured by intelligency from the mastery of science, but also from the application of learning methods, understanding of learners, having the attitude and good character to be a role model.

To have those things as a teacher candidate, a student must have maturity to be ready to become a teacher. Readiness to become a teacher is not only obtained from science alone but such knowledge should be practiced in order to gain experience. These experiences aim to enable students to acquire and master competencies to be teachers acquired through micro teaching courses and Field Experience Program (PPL).

Micro teaching course is a means to train basic teaching skills for teacher candidates. The main objective of micro teaching is that students at the end of the course will have competencies (knowledge, skills and basic values or attitudes reflected in thinking and acting) as teacher candidates so as to have experience and readiness to teach at a school institution (Suwarna, 2006, p.4).

Based on observations on the 2015/2016 Mechanical Engineering Education program, students are less serious in implementing micro teaching practices because the students only teach their own friends. Students only make micro teaching as a formality to obtain the score of micro teaching practice. In addition, the implementation is only 5-6 meetings. This causes the students lack in good understanding of basic skills in teaching. On the other hand, many students are getting good grades.

In the course of micro teaching 54.5% of the 69 students have above-average grades. In fact, the good learning achievement of micro teaching does not make students emotionally ready to face students. Good learning achievement also does not affect the readiness of students to teach in the real classroom atmosphere when they do Field Experience Program (PPL).

Field Experience Program according to (Asril, 2015, p.92) is essentially done by one under guidance, as an exercise that is exhibited in teaching, aims to gain teaching skills, and one of the requirements to meet a Field Experience Program (PPL) is an exercise to gain skills in teaching so that a teacher candidate has the readiness and ability to perform the task well. PPL is a means for students to apply the knowledge they have gained in lectures in an actual learning process. Implementation of Field Experience Program (PPL) will prepare students to become professional educators or teachers with a readiness in some aspects of knowledge, attitude, understanding, skills, and interests.

Based on observation and experience, students have less knowledge and lack of teaching experience. Thus, some students, especially PTM, have some problems, namely difficulties in preparing the Lesson Plan Implementation (RPP), determining the model and learning method. Some students only use Field Experience Program (PPL) as a means of formality, students only attend partnered-schools when they have duties to teach. Supervisors who are supposed to supervise and guide attend the school during exams.

From the problems faced by students during Field Experience Program (PPL), the achievement of micro teaching which is obtained has a less contribution in the learning process. This is also proved in a research conducted by (Najjah, 2014) that obtained statistically regression results of one predictor of micro-teaching score to the ability of teaching in Field Experience Program (PPL) of undergraduate of Biology Program in academic year of 2010 Faculty of Science Tarbiyah And Teacher Training IAIN Walisongo Semarang has no significant effect. This is shown by the result of Freg 0,3217 smaller than Ft (0,05) 4,17. The results show that micro teaching can not affect the readiness of students in the teaching process. Students are still experiencing poor mental constraints and readiness in the Field Experience Program (PPL).

The success of Field Experience Program (PPL) is formulated with reference to four competencies that must be possessed by professional teachers, namely pedagogic competence, personal competence, professional competence and social competence. Maturity of students in mastering the competence of teachers can affect the readiness to become teachers. However, only 52% of the 69 students achieved above-average score in The success of Field Experience Program (PPL). Students are still less mentally prepared to teach at partnered-school. From the good achievement of Field Experience Program (PPL) that has been obtained by students, only 48% have maturity and master the competence of teachers. This is because of the lack of ready students to become teachers.

Purwati (2015) argues that the readiness to become a teacher is the overall condition of a person or an individual at the point of maturity or circumstances that are needed to respond and practice an activity in which the attitude contains the mental, skills and attitudes that must be possessed and prepared during the teaching activity. The indicators of readiness to be teachers in this study are as follows: (1) Maturity in pedagogic competence (2) Maturity in personal competence (3) Maturity in social competence (4) Maturity in professional competence.

The purpose of this study are:

- (1) the correlation between the learning achievement in Microteaching and the preparedness to become teachers of the students of the Mechanical Engineering Education of the Class of 2012;
- (2) the correlation between the learning achievement in Field Experience Program (PPL) and the preparedness to become teachers;

(3) the correlation of the learning achievements in Microteaching and PPL to the preparedness to be teachers. Its population was all of the students as many as 69 of the Mechanical Engineering Education, the Class of 2012.

RESEARCH METHODS

1. Method

The research was conducted in the Faculty of Teacher Training and Education, Sebelas Maret University, Campus V UNS Jendral Ahmad Yani Street 200A Pabelan, Kartasura, Sukoharjo. The population used is students of Mechanical Engineering Study Program class of 2012 as many as 69 people. The sampling technique using simple random sampling technique using Isaac and Michael tables with 5% error rate so the sample of the population is 58 people.

1.1. Method of collecting data

Data collection techniques and instruments using documentation method which used to obtain data of learning achievement of micro teaching and Field Experience Program and questionnaire method in the form of a statement to obtain data readiness to be a teacher. In this questionnaire instrument using measurement technique with Likert scale. Each of these statements has a different score. The revelation scores are presented in Table 1.

Table 1. Score of Readiness Questionnaire Being a Teacher

Alternative Answers	Positive	Negative
Strongly Agree (SA)	5	1
Agree (A)	4	2
Somewhat Agree (SwA)	3	3
Disagree (D)	2	4
Strongly Disagree (SD)	1	5

Questionnaire instruments becomes teacher are tested in Study Program of Building Engineering Education FKIP UNS class 2012 a total of 35 students. The test results were analyzed using grain validity test with Product Moment formula from Pearson. The statement item is said to be valid if the value is $r_{count} > r_{table}$. At r_{table} for respondent (N) 35 student is 0,334 so that $r_{count} > 0,334$. So from 40 statement items were tested, 10 items are declared invalid (failed) and 30 items are declared valid. Reliability test in this research use Alpha Cronbach coefficient formula with result of 0,875.

1.2. Data Analysis Method

Data analysis techniques use partial correlation to obtain the correlation between a free variable with the dependent variable by controlling or controlling the other independent variables and multiple linear regression to measure the correlation between more than one independent variable to the dependent variable with a significance level of 5% analysis with the help of SPSS 21.0 program. For the purposes of the analysis, a prerequisite analysis test consisting of normality test, linearity test, and multicollinearity test are performed.

2. Results and Discussion

Test requirements analysis is done with the help of SPSS Version 21.0 program before doing hypothesis testing. Testing requirements analysis in this study using the test of normality, linearity test, and multicollinearity test. The results of the test requirements analysis as follows:

2.1. Normality test

Normality test using the Kolmogorov-Smirnov Z formula. The residual distribution is said to be normal when the significance value is > 0.05 . Normality test results show that the data of each variable is normally distributed because $pvalue > 0,05$. A summary of normality test results is presented in Table 2.

Table 2. Normality Test Results

Variable	significance	Conclusion
Learning achievement in micro teaching	0,626	Data is normally distributed
Learning achievement in PPL	0,326	
preparedness to become teachers	0,822	

2.2. Linearity Test

The correlation is said to be linear if the value of significance on linearity < 0.05 . The summary of the linearity test results is presented in Table 3.

Table 3. Linearity Test Results

Variable	significance	Conclusion
Learning achievement in micro teaching with preparedness to be teachers	0,004	linier
Learning achievement in PPL with preparedness to be teachers	0,002	

2.3. Multicollinearity Test

The test results are said to be free from multicollinearity if the value of variant inflation factor (VIF) <10.00 and or tolerance value >0.10 . The result of multicollinearity test of the variables in this study shows the VIF value of 1,142 and the tolerance value of 0,876. So it can be concluded that the research variable is free multicollinearity.

RESULTS AND DISCUSSION

The data of research were analyzed by using the partial correlation analysis. From result of analysis obtained result $r_{count} > r_{table}$ ($0,262 > 0,259$) with significance value 0,049 ($0,049 < 0,05$). This shows the relationship is positive and significant correlation between the learning achievement in Microteaching and the preparedness to become teachers of the students of the Mechanical Engineering Education of the Class of 2012. That is, in the first hypothesis H_a accepted there is a positive relationship of learning achievement of teaching and the preparedness to become teachers of the students of the Mechanical Engineering Education of the Class of 2012.

The data of research were analyzed by using the partial correlation analysis.. The relationship is positive if $r_{arithmic} > r_{table}$ and stated significant if the value of $p_{value} < 0,05$. From the analysis results obtained correlation $r_{count} > r_{table}$ ($0,321 > 0,259$) with significance value 0,015 ($0,015 < 0,05$). This shows that the correlation of PPL achievement and the preparedness to become teachers of the students of the Mechanical Engineering Education of the Class of 2012 is stated positive and significant. That is, the first hypothesis H_a accepted that there is a positive correlation of achievement Field Experience Program (PPL) and the preparedness to become teachers of the students of the Mechanical Engineering Education of the Class of 2012.

The results analyzed by using multiple regression analysis. Correlations are said to be positive if $F_{count} > F_{table}$. From the analysis results obtained correlation value $F_{arithmic} > F_{table}$ From the analysis results obtained multiple correlation (R) of 0.474 with a significance value of 0.001 ($0.001 < 0.05$). The result of uga analysis shows that the value of F_{count} is 7,970 with F_{table} price at df_1 (2) and df_2 (55) 3,165. Thus F_{count} (7,970) $> F_{table}$ (3,165). There is a positive and significant correlation of the learning achievements in Microteaching and PPL to the preparedness to become teachers. That is, in the third hypothesis H_a accepted that there is a positive correlation of learning achievement of micro teaching and Field Experience Program (PPL) together to the preparedness to become teachers of the students of the Mechanical Engineering Education of the Class of 2012. Engineering students class of 2012. Regression model is $Y = -15,024 + 0,795X_1 + 0,701 X_2$. The coefficient of determination (R^2) is 0,225. The magnitude of the contribution of each variable is shown in Table 4.

Table. 4 The results Calculation of Effective Contributions and Relative Contributions

No	Variable	Effective Contributions	Relative Contributions
1	Learning achievement in Microteaching,	9,41%	41,82%
2	Learning achievement in Field Experience Program,	13,09%	58,18%
Total		22,5%	100%

Discussion of the results of this study indicates that the learning achievement of micro teaching related to the level of the preparedness to become teachers. The magnitude of the correlation of learning achievement of micro teaching and the preparedness to become teachers of the students can be seen from the relative contribution of 9,41%. This means that the influence of learning microteaching achievement on preparedness to become teachers contributes only 41.82%. This happens because of the lack of effective implementation of micro teaching. Microteaching that aims to train, prepare and improve the shortcomings and advantages in teaching is less optimized by students.

In the implementation, students are less serious in practicing microteaching because in addition, the implementation of micro teaching practice is 5-6 only practice meetings. The less implementation of practices that cause little students lack the basic skills of teaching.

Research conducted by Ralph (2014) at the University of Saskatchewan found that micro teaching is an effective pedagogical tool to improve the competence of teaching prospective teachers and confidence. Research by Dweikat (Cebeci, 2016) also found that most students think that microteaching provides an opportunity to reflect on teaching performance and to gain an understanding of the teaching practice.

Microteaching is also very important to generate self-improvement potential. Punia, Miglani and Singh (2016) found that by the teaching of a prospective teacher or student the opportunity to experience the experience they gain from microteaching will be transferred in the teaching practice to a real ambience to explore the pedagogical experience. Thus, the microteaching of the students can gain experience and add basic teaching skills that will be used in the teaching process in real classroom setting. Thus the learning achievement of micro teaching can affect the preparedness to become teachers of the student.

The correlation of learning achievement in PPL and the preparedness to be seen from the relative contribution of 58.18%. That is, the higher the achievement of PPL then the readiness to become a student teacher also increases. Conversely, the lower of learning achievement in PPL, the preparedness to become teachers of the student also decreases. Research conducted by Ningsih (2014) also found there is a positive and significant correlation between PPL and preparedness to become teachers of IPS Education force 2010. Novitasari research (2014) also found the influence of PPL implementation on preparedness to become teachers of the student only contributed or influenced by 12,4%. This means that there is little influence or contribution from the implementation of PPL activities to teacher preparedness. The results of this study mention the ineffectiveness of implementation of all aspects, namely (1) PPL is only used as a formality by some students. Students also lack the mastery in delivering the materials, preparing lesson plans and sets. Students also less use of PPL as a means to train himself to become a real teacher (2) Less effective among teachers as supervisors and supervisors of students in carrying out its duties. Some students are still reluctant to tell the problems faced in the classroom to the tutors. (3) Supervision and guidance conducted by supervisors are also less effective. It can be seen that almost all lecturers are only present to the school during the PPL exam.

PPL competency standards that refer to the four teacher competencies both in the context of learning and in the context of the life of teachers as members of the community indicate the preparedness of students to become teachers. Murtiningsih (2014) also said that the practice of PPL requires students to apply the competence of teachers to produce good quality learning. Maturity in the competence of teachers is a stock of students to prepare himself to be a good teacher. Thus, students who master and have the competence of teachers will get a good learning achievement in PPL.

The results of multiple regression equations can be used to make predictions. This means that learning achievement of micro teaching and PPL can be used to the preparedness to become teachers of the students. The line of multiple regression equation is $Y = -15,024 + 0,795X_1 + 0,701X_2$, where (a) Constant value equal to -15,024 can be interpreted if learning achievement of teaching of micro and PPL value is 0, hence teacher readiness value is -15,024. (b) The value of regression coefficient of learning achievement in microteaching is positive that is 0,795 meaning every improvement of learning achievement in microteaching equal to 1 unit, will increase preparedness to become teacher equal to 0,795 with assumption of independent variable of other value fixed value. (c) The value of learning achievement in PPL regression coefficient is positive which is 0,701. This can mean that every increase in PPL achievement of 1 unit, it will increase the preparedness to become teacher of 0.701 with the assumption of other independent variables are fixed value.

The results of research show that the coefficient of determination (R^2) is 0.225. This means that the magnitude of the correlation of the learning achievements in Microteaching and PPL to the preparedness to become teachers. can be seen from the large effective contribution of 22.5% and the rest influenced by other variables not included in this model also affect the variable sterikat. This means that learning achievement of micro teaching and PPL only contributes little to the preparedness to become teachers of the students of the Mechanical Engineering Education of the Class of 2012.

The contribution of learning achievement in microteaching is less than learning achievement in PPL for effective contribution 9,41% <13,09% and relative contribution 41,82% <51,18%. This is because microteaching is only a means to train students in basic teaching skills but even so it is also a provision of students to become teachers. This is because microteaching provides benefits for students in developing effective learning strategies. With microteaching the students will be trained to speak and manage the class.

PPL achievement has an effective contribution value greater than the effective contribution of learning achievement of micro teaching to the preparedness to become teachers. This is because PPL is a true teaching practice suggestion. Students are required to master the competence of teachers, so in the end later students are more mature in mastery of four teacher competence in pedagogic competence, professional competence,

personality competence and social competence. This is in line with research conducted Ni'mah (2014: 337) argued that the readiness to be a teacher is the ability of students in carrying out the tasks of teachers and understanding and master the competencies that must be possessed by teachers.

In Novitasari's research (2014: 9) also states that the preparedness to become teachers of the students can be measured based on the level of quality of the mastery of four teaching competencies namely pedagogic competence, personality competence, social competence and professional competence. Thus, PPL can improve students' preparedness to become teachers. Therefore, students must be serious in implementing the practice of microteaching and PPL for the preparedness to become teachers are also more mature.

CONCLUSION

Based on the results of research and discussion can be concluded that:

1. There is a positive and significant correlation between the learning achievement in Microteaching and the preparedness to become teachers of the students of the Mechanical Engineering Education of the Class of 2012;. The positive contribution of learning achievement of micro teaching with the readiness of being a teacher can give clues that students who have high scores will support the readiness of students to become teachers.. This is because micro teaching can lead to basic teaching skills of a teacher.
2. There is a positive and significant correlation between the learning achievement in PPL and the preparedness to become teachers of the students of the Mechanical Engineering Education of the Class of 2012. The positive contribution of PPL achievement with the readiness of being a teacher can give a hint that students who have high value mean having high teacher competence also hence readiness become teacher also higher. Students who carry out the PPL seriously will have a maturity in the competence of teachers as preparation to prepare themselves to become educators.
3. There is a positive and significant correlation of the learning achievements in Microteaching and PPL to the preparedness to become teachers of the students of the Study Program of Mechanical Engineering Education of the Class of 2012. The positive contribution of learning achievement of teaching and learning PPL with the readiness to become a teacher in the students of study program of PTM force 2012 is proof that the importance of seriously implementing the teaching of micro and PPL because will lead to readiness to become teachers.

Based on the results of the study, discussion, and implications, this study provides some suggestions as follows

1. Students should maintain or improve the implementation of micro teaching practices and Field Experience Program (PPL), so that the skills and competence of teachers can be mastered so that micro and PPL teaching can contribute more in preparing to become teachers. In addition, students seek teaching experiences outside of class assignments such as tutoring or other lessons so that student personalities as teachers are formed and students are better prepared to become teachers.
2. Mechanical Engineering Education Study Program (PTM) maintains an experience program that has been implemented so that students are matured in preparing to become teachers. In addition to conducting joint evaluations with students for a better run program to produce professional educators
3. For the next research should not only take the learning achievement from the students but do research by observing directly on the student practice. Researchers also make indicators about readiness more broadly, so that the results obtained more focused with the problem under study.

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