

Micro-teaching course: Does it affect students' teaching ability?

Safrul Muluk*

Universitas Islam Negeri Ar-Raniry, Banda Aceh, Indonesia
safrul.muluk@ar-raniry.ac.id

Habiburrahim Habiburrahim

Universitas Islam Negeri Ar-Raniry, Banda Aceh, Indonesia
habiburrahim@ar-raniry.ac.id

Ardiansyah Ardiansyah

Universitas Islam Negeri Ar-Raniry, Banda Aceh, Indonesia
ardianputra2609@gmail.com

Manuscript received April 8, 2020, revised May 2, 2019, first published May 18, 2020, and available online May 21, 2020. DOI: 10.22373/ej.v7i2.6712

Recommended APA Citation

Muluk, S., Habiburrahim, H., & Ardiansyah, A. (2020). Micro-teaching course: Does it affect students' teaching ability? *Englisia: Journal of Language, Education, and Humanities*, 7(2), 143-155. <https://doi.org/10.22373/ej.v7i2.6712>

ABSTRACT

This explanatory quantitative study aimed to identify the correlation between the students' Micro Teaching and Field Pre-Service Teaching courses. The population of the study was the students of the English Education Department of the Faculty of Education and Teacher Training Universitas Islam Negeri (UIN) Ar-Raniry, Banda Aceh, Aceh, Indonesia who had taken the micro-teaching class and had conducted field pre-service teaching, a total of 141 students. Then, 43 students were selected as the sample of this study. Data came from these students' scores in Micro Teaching class and Field Pre-Service Teaching. The data were analyzed by using Pearson Product Moment with the SPSS 16.0. The findings indicated that there was no significant correlation between micro-teaching and field pre-service teaching (p -value = .196; $p > .05$). In addition, the strength level of the Pearson correlation coefficient between the two variables was negative and weak ($r = -0.201$). It can be interpreted that the students' teaching ability was not dependent upon their micro-teaching scores.

Keywords: *Micro-teaching course; Pre-service teaching; Teaching instruction; Students' teaching ability*

* Corresponding author

1. Introduction

For quality learning instruction to happen, educators should possess four competencies: pedagogic, professional, individual, and social. During the teaching and learning process, an instructor needs to demonstrate the required skills to deliver quality learning. In the context of a teacher training program, Pre-service Teaching Program is designed to create a teaching-learning environment that closely imitates real classroom situations (Advisory Committee on Teachers Education and Qualification, 2013). The teacher training program, or commonly known as micro-teaching, is practiced by giving pre-service teachers the opportunity to rehearse real teaching situation within a small group of students, to show their teaching skills before their classmates (Remesh, 2013). The aim of this course is to equip pre-service teachers with psychological status, aptitude, and required capacities needed in schools (Asmani, 2010). Moreover, Kumari and Rao (2004) state that small-scale teaching settings are intended to prepare future-teachers with appropriate teaching methodology, which in turn helps them deal with the complexities of the ordinary instructional processes.

Teaching in a classroom with 30 students for 90 minutes is, for any teachers, a daunting, uneasy, and complex undertaking. For pre-service teachers, it will be even more intricate because during the Micro Teaching course they should learn to be students and teachers at the same time. For this reason, potential distractions during teaching practice may arise. With regard to this particular issue, it is through the Micro Teaching course that the students are given the opportunities to rehearse required teaching skills and competencies in the small scale teaching environment. The teaching practice takes place in a classroom in front of their peers, aimed at preparing them with psychological enthusiasm, skills, and comprehensive abilities required to be able to take part in teaching practice in a school environment (Asmani, 2010). Micro-teaching is also defined as a training procedure, fabricated with the intention to give pre-service teachers and pupils the opportunity to collaborate in a practice situation (Kumari & Rao, 2004). It is created to simplify the intricacies of the regular teaching process, and at the same time to give the students the opportunities to practice teaching and to prepare them for future teaching careers (Cooper & Allen, 1970).

At the Faculty of Education and Teacher Training (FTK) of Universitas Islam Negeri Ar-Raniry (Ar-Raniry State Islamic University/UIN Ar-Raniry), where this study was conducted, the students are required to take Micro Teaching course as part of the compulsory subjects before they graduate. Being responsible for producing qualified future teachers and lecturers, the Faculty has cooperated with schools in Banda Aceh and Greater Aceh regencies in the Province of Aceh, Indonesia to arrange the students' placement in schools. This program for the students is called Field Pre-Service Teaching (FPT) which is aimed at establishing and developing teaching competencies as the prerequisite of teaching practice in schools. The students can only register for FPT once they finish taking and passing a semester-long Micro Teaching course. The FPT consists of 16 meetings in which the students are given the opportunities to teach in

a classroom in a designated school. The FPT will be graded towards each respective student's final GPA. Even so, there is no guarantee that the students taking the Micro Teaching class will get good scores and pass the course or will be able to deliver an ideal teaching environment in the classroom during FPT.

Teaching ability is defined as teachers' ability to stimulate and create a supportive classroom environment which includes cognitive, affective, and psychomotor aspects, involving planning, evaluation, and assessment phases to accomplish learning objectives (Hasibuan & Moedjiono, 2010). In a similar vein, Kyriacou (2009) delineates teaching ability as a distinct and comprehensible responsibility by teachers in which teachers' knowledge, decision-making, and actions are paramount during the process in the attempt to foster students' learning.

As real teaching at school poses challenges to pre-service teachers, the Micro Teaching course, designed to imitate a classroom environment, can help develop the students' professional competencies required for the work of teachers in any type of educational institution. Through this course, the students get the opportunity to self-evaluate what works and what does not in relation to their teaching skills competence (Volet, Jones, & Vauras, 2019). On the backdrop of the above descriptions, the researchers conducted a study about the correlation between Micro-Teaching course and the teaching ability during FPT of the students of the Faculty of Education and Teacher Training, UIN Ar-Raniry, Aceh, Indonesia. The question posed in this study was: "Is there any relationship between micro-teaching and field pre-service teaching of the students of the FTK of UIN Ar-Raniry?"

To answer the above question, the study aimed to test the following hypotheses:

H_0 = There is no significant relationship between micro-teaching and field pre-service teaching of the students of the FTK of UIN Ar-Raniry.

H_a = There is a significant relationship between micro-teaching and field pre-service teaching of the students of the FTK of UIN Ar-Raniry.

2. Literature review

2.1. Micro-teaching

Micro-teaching is perhaps one of the most important innovations in the area of pedagogy related to the practices and the results of teachers' works. Undoubtedly, the works of teachers have not been given enough credits. Despite demanding requirements of knowledge, skills, and professional attitude, in reality in many countries, the teaching profession is still taken lightly. As a matter of fact, educational experts and theorists alike agree that having high quality teachers may undoubtedly provide a pathway to students' academic success (Vagi, Pivovarova, & Barnard, 2019). The implementation of micro-teaching has been considered advancement in the area of teaching instruction. Cooper and Allen (1970) state that Micro Teaching is:

A teaching situation is scaled down in terms of time and numbers of students. Usually, this has meant a four- to twenty-minute lesson involving 3 to 10 students. The lesson is scaled down to reduce some of the complexities of the teaching acts, thus allowing the teacher to focus on a selected aspect of teaching (p. 1).

In the same vein, Mahmud and Rawshon (2013) define micro-teaching as a teaching training tool that offers students the opportunity to put their knowledge in the area of instructional methods and strategies into practice, under organized and structured conditions. Micro-learning can therefore be defined as a teaching scenario that is conducted on a specific amount of pre-determined time with a limited number of students under a controlled classroom environment, where the instructor or lecturer only explains the principle of teaching skills (Hamalik, 2009). Initially developed in 1960s at Stanford University, micro-teaching is designed to provide students with the chance to engage in real-like teaching situations to enhance teaching appearance through open classroom interconnected dialogue. Since then, it has been modified to suit the need of the university in the form of teacher training programs in order to stimulate focused, constructive criticisms from members of the class and instructor, with the intention to improve students' teaching and learning strategies, which in the end results in the improved acquisition of required teaching skills and positive strengthening of students' teaching experiences. In other words, micro-teaching is able to set a trial environment for student teachers to teach (Saban & Coklar, 2013).

For prospective teachers, micro-teaching provides chances for the students to put their pedagogical skills into practice in front of their classmates in a positive and supportive atmosphere. In micro-teaching, these student teachers can develop their skills to create lesson plans, select teaching goals, draw the students' attention, talk in front of an audience, offer questions, arrange teaching time, and assess their teaching (Kiliç, 2010; Hirshberg, Flook, Enright, & Davidson, 2020). As for the teachers themselves, several foreseeable benefits that micro-teaching generates include the facilitation of refreshment of pedagogical programs as part of teachers' professional development agenda. Another incentive that micro-teaching provides to teachers' instructional skills is the provision of personalized teaching experiences and the improvement taking place in the educational curriculum.

2.2. The significance of micro-teaching

As mentioned in the earlier section of this research paper, for prospective teachers in Indonesia to be able to develop teaching skills, they must take part in Micro Teaching as one of the courses purposely designed to enable the students to possess essential teaching skills. Due to its significance, micro-teaching has been adopted and implemented, not only as a prerequisite of FPT (Field Pre-Service Teaching) at the Faculty of Education and Teacher Training, UIN Ar-Raniry, but also as in-service training for teachers to improve their advance teaching skills.

Some of the benefits that prospective teachers can get from Micro Teaching class include the competency to create lesson plans, determine teaching goals, build a sense of confidence to speak in front of students, develop questioning strategies, develop and strengthen assessment and evaluation techniques, and manage time effectively (Kılıç, 2010). Morse and Popovich (2009) add that micro-teaching does not only helps to develop students' teaching skills, but also assists in selecting the most effective teaching methods and strategies under certain circumstances, enabling them to consider and implement a variety of teaching skills. From the discussion above, we can highlight that there are at least three benefits of micro-teaching for prospective teachers. Micro teaching plays a role in mastering teaching skills, helps identify the extent of students' teaching skill strengths and weaknesses, and helps students to get comprehensive, accurate, and objective information from observations of the classroom training process.

2.3. Pre-service teaching

Pre-service teaching course or Field Pre-Service Teaching (FPT) is a teaching activity taking place in schools carried out by students as one of the mandatory courses that must be taken in order to graduate. The main purpose of this course is to integrate theoretical knowledge gained in micro-teaching class with teaching practice in schools (Damrow & Sweeney, 2019). Besides teaching at school, the students are also involved in typical administrative tasks in schools.

Hamalik (2009) asserts that FPT should be directed towards the encouragement of the students' professional teaching competencies. FPT provides a realistic evaluation of the students' teaching strengths and weaknesses, and helps them develop classroom management strategies (Parkay & Standford, 2011). Pre-service teaching or FPT, a 4-credit academic program at the Faculty of Education and Teacher Training of UIN Ar-Raniry, is a mandatory course aiming at providing real experience and expanding the students' knowledge and skills in four competencies: pedagogic, professional, individual, and social competencies, which in the end enable them to undertake, among others, administrative duties in schools. The students are also expected to take part in counseling sessions, religious guidance, and other affairs in schools.

As part of the course, the students are required to learn about the government's general and basic educational policies and to know the traditions in the education sector that have been considered to make an invaluable intellectual contribution to the education sector of the country. In addition, prospective teachers also need to be aware of the area of educational socio-psychology which helps them to closely interact and relate with their students (Meutia, Elyza, & Yusnila, 2018). To be able to encourage, excite, and trigger students' motivation is an important and integral part of teaching skills that must be possessed by prospective teachers.

In a similar vein, Lynch (2016) suggests that the experience gained from pre-service teaching enables prospective teachers to identify their strengths and weaknesses

in certain subjects. Pre-service teaching also allows future teachers to determine the age group of students they are comfortable teaching, to apply their prior knowledge, and also to shape their teaching skills under professional teachers. To sum up, pre-service teaching provides the opportunity to potential teachers a first-hand account of what teachers do on a day-to-day basis in school.

3. Method

As this study examined the connection between two variables, the students' scores in Micro Teaching class and Field Pre-service Teaching, this study was considered quantitative correlational research. Creswell (2012) asserts that score prediction and relationships among variables are explained by correlational research. As this research investigated the relationship between the two variables (scores from Micro Teaching course and FTP), a bivariate correlation model was used to examine and analyze the two variables. It is a statistical technique used to determine the existence of relationships between two different variables (i.e., X and Y).

3.1. Research design

This study used explanatory design. Creswell (2012, p. 340) states that an explanatory design is used when the researcher “is interested in the extent to which two variables (or more) co-vary, that is, where changes in one variable are reflected in changes in the other. Explanatory designs consist of a simple association between two variables or more than two”. Furthermore, he suggests that the main characteristics of this design are that the data of two variables are collected simultaneously and at least two scores for each individual in the group – one for each variable should be obtained by the researcher. Benitez, Henseler, Castillo, and Schuberth (2020) also assert that explanatory research is aimed at understanding clausal relationships among theoretical frameworks of interest for a certain community.

3.2. Sampling technique

The data used in this research were obtained from the Instructional Development Center (IDC) at the FTK of UIN Ar-Raniry. The data included the scores of the students of the English Education Department who had taken Micro Teaching class and had conducted FPT. As such, out of 247 students, 141 students fit into the criteria and became the population of this study. The students' scores in the Micro Teaching class served as the independent variable and their scores in FPT served as the dependent variable.

In determining the sample of this research, the researchers selected 43 students (30% of the total population) by using a random sampling technique. Two to three students of each micro-teaching group (consisting of 6-10 students per school) who had completed FPT were selected as the sample of this research.

After selecting the sample, the researchers collected their scores to be analyzed. Reports of the students' scores in Micro Teaching class and FPT obtained from IDC became the main source of data used in this study.

3.3. Technique of data analysis

To test the hypotheses, the researchers performed statistical analytical calculations of the data consisting of two variables: the students' micro-teaching scores (independent variable (X)) and the students' pre-service teaching scores (dependent variable (Y)).

The researchers used the Product Moment statistical formula in the SPSS 16.0 application to find the correlation value p (sig. 2- tailed), with the significance level was set at 0.05. If the p -value was equal or less than 0.05, H_0 is rejected and H_a is accepted. Once the p -value was identified, the researchers conducted another statistical calculation to interpret the Pearson correlation coefficient, r , between the two variables to see the correlational strength between the variables.

The following is the formula of the Pearson correlation coefficient (Hatch & Farhady, 1982):

$$r_{xy} = \frac{N(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

Notes:

- r_{xy} : correlation coefficient of variable X and Y
- X : micro teaching scores
- Y : teaching practice (FPT) scores
- N : number of sample

After the Pearson correlation coefficient or r was identified, the researchers compared the value with the table of correlation coefficient (see Table 3) which enabled the researchers to determine the strength of the correlation between the two variables in scales of very strong to very weak, and either a positive or negative correlation.

4. FINDINGS

4.1. The results of data analysis

To investigate the correlation between Micro Teaching and Field Pre-Service Training (FPT), two datasets were used, the independent variable (X) (the students' micro-teaching scores) and the dependent variable (Y) (the students' pre-service teaching scores). The following table highlights the raw scores in micro-teaching (X) and FPT (Y).

Table 1

Students' scores in micro-teaching and field pre-service teaching courses.

No	Initials	X	Y
1	A	85.15	95
2	B	75.8	92.33
3	C	80	92
4	D	87.15	91.65
5	E	83.3	94
6	F	87.65	89.7
7	G	87	91
8	H	89	85
9	I	87.5	90.65
10	J	89	96.7
11	K	92.5	90
12	L	82	92.5
13	M	88.05	87.7
14	N	84.15	97.3
15	O	86	93.85
16	P	78	91.5
17	Q	90	94.41
18	R	84	86
19	S	84.25	89.3
20	T	87.3	85
21	U	86.25	88
22	V	86.05	91
23	W	81.25	92.7
24	X	88	90.9
25	Y	88.75	94
26	Z	80	94
27	AA	93.25	88
28	BB	92.5	91
29	CC	89.1	90
30	DD	86	93.8
31	EE	91	90
32	FF	86.25	89
33	GG	88	91
34	HH	86.5	91.03
35	II	87	88
36	JJ	84.1	91
37	KK	88.05	95
38	LL	86	88.7

39	MM	85.25	94.2
40	OO	87.95	96
41	PP	86	95
42	RR	87.53	90

The SPSS 16.00 statistical application was used to analyze the above datasets. Pearson Product Moment was used to identify the significant correlation of the two variables. The statistical calculation is presented in the following table.

Table 2

Descriptive statistics results.

	Mean	Std. Deviation	N
Micro teaching score	86.2926	3.61129	43
FPT score	91.4051	2.95473	43

Table 3

Pearson correlation results.

		Micro teaching (X)	Pre-service teaching (Y)
Micro teaching (X)	Pearson Correlation	1	-.201
	Sig. (2-tailed)		.196
	N	8	43
Pre-service teaching (Y)	Pearson Correlation	-.201	1
	Sig. (2-tailed)	.196	
	N	43	43

*Correlation is significant at the 0.05 level (2-tailed).

It can be observed from the table that the Pearson Product Moment revealed that sig. (2- tailed) or p -value was .196 and Pearson correlation (r) was -0.201. First, it can be seen that the value of p is higher than .05 ($p > .05$), which statistically means that there was no significant correlation between the students' micro-teaching scores and the ability of field pre-service teaching.

Secondly, the Pearson correlation coefficient or r is (-0.201), in which it can be interpreted that the level of strength of the correlation between the two variables was weak. The Pearson's r value (r_{xy}) is consulted in the below table.

Table 4

Correlation coefficient table.

Correlation Coefficient (<i>r</i>)	Interpretation*
0.80 – 1.00	Very Strong
0.60 – 0.79	Strong
0.40 – 0.59	Moderate
0.20 – 0.39	Weak
0.00 – 0.19	Very Weak (or no correlation)

**This is also used for negative correlation with opposite interpretation*

From the table, it can be concluded that when the value is close to 0, it means that the correlation is weak. In contrast, when the *r* value is close to +1, it means that there is a strong correlation between the variables (Coolidge, 2012). The calculation of *r* value above was -0.201, meaning that it had a weak correlation on the negative side. The interpretation of this result was the two variables had a weak negative correlation.

5. Discussion

Based on the result of data analysis on the correlation between the students' scores of micro-teaching course and field pre-service teaching, it was found that *p*-value was .196, meaning that *p*-value was higher than .05 ($p > .05$). As such, it showed that there was no significant relationship between the students' micro-teaching scores and their ability of pre-service teaching, answering the research question proposed. Therefore, H_0 was retained and H_a was rejected.

The result was also supported by the second statistical analysis of Pearson's *r* (-0.201) corresponding to the correlation coefficient table (Table 3). The *r* value in this analysis indicated a negative result and a weak association.

Therefore, the study revealed that there was no significant relationship between the students' micro-teaching and their pre-service teaching ability. The correlation coefficient analysis also found that the correlation between the two variables was declared negative and weak.

The result of this study was similar to the one conducted by Najjah (2014) who looked at the influence of Micro Teaching scores on the teaching ability of Biology Department Students at State Insitute for Islamic Studies Walisongo, Central Java, Indonesia. She found that there was no significant correlation between the two variables. On the other hand, another study showed a contrasting result from this present study. Widiarini, Tripalupi, and Meitriana (2015) conducted a study on the students of Economics Education of Ganesha University of Education, Bali, Indonesia. They found that the students' Micro Teaching scores were correlated with pre-service teaching ability ($p = .007$; $p < .05$) in which the correlation was positive and weak ($r = 0.272$).

In the context of this study, however, it can be implied that micro-teaching may not be the only contributing factor affecting the students' teaching skills in pre-service

teaching. Other factors influencing teaching skills and professionalism may also be related to teachers' beliefs (Barizi & Idris, 2009), as well as teachers' educational backgrounds, teaching experiences, and work ethics (Widiastusi, 2011).

6. Conclusion

The study investigated the correlation between micro-teaching scores and the ability to teach during pre-service teaching. The Pearson Product Moment was used to analyze the correlational results between two variables: the students' micro-teaching scores and their scores during pre-service teaching. The study concluded that there was no significant relationship between micro-teaching and field pre-service teaching of English Education Department students of the Faculty of Education and Teacher Training of UIN Ar-Raniry. The findings revealed that p -value was .196 ($p > .05$). The level of the correlation coefficient between the two variables was negative and weak as revealed by Pearson's r (-0.201). In this case, these results also imply that micro-teaching may not be the only factor that influences the students' teaching skills during pre-service teaching program in schools.

References

- Advisory Committee on Teachers Education and Qualification. (2013). *The instructor advantage framework and the persevering with professional development of teachers*. UK. Retrieved from: <https://www.info.gov.hk/gia/general/201305/15/P201305150446.htm>
- Cooper, J. M., & Allen, D. W. (1970). *Microteaching: history and present status*. Washington, D.C: ERIC Clearing House on Teacher Education.
- Asmani, J. M. (2010). *Microteaching and crew teaching*. Yogyakarta, Indonesia: DIVA Press.
- Barizi, A., & Idris. M. (2009). *Menjadi guru unggul*. Jogjakarta, Indonesia: ArRuzz Media
- Benitez, J., Henseler, J., Castillo, A., & Schuberth, F. (2020). How to perform and report an impactful analysis using partial least squares: Guidelines for confirmatory and explanatory IS research. *Information & Management*, 57, 1-16.
- Coolidge, F.L. (2012). *Statistics: A gentle introduction*. Thousand Oaks, CA: Sage Publications.
- Creswell, J. W. (2012). *Educational research: Planning, conducting and evaluating quantitative and qualitative research* (4th ed.). New York, NY: Pearson.
- Damrow, A. L., & Sweeney, J. S. (2019). Beyond the bubble: Preparing preservice teachers through dialogue across distance and difference. *Teaching and Teacher Education*, 80, 255–265.
- Hamalik, O. (2009). *Proses belajar mengajar*. Jakarta, Indonesia: PT. Buma Aksara.

- Hasibuan, J. J., & Moedjiono. (2010). *Ketrampilan dasar mengajar guru dan dosen*. Jakarta, Indonesia: Grafindo.
- Hatch, E. M., & Farhady, H. (1982). *Research design and statistics for applied linguistics*. Rowley, MA: Newbury House.
- Hirshberg, M. J., Flook, L., Enright, R. D., & Davidson, R. J. (2020). Integrating mindfulness and connection practices into preservice teacher education improves classroom practices. *Learning and Instruction*, 66, 1-11.
- Kılıç, A. (2010). Learner-centered micro teaching in teacher education. *International Journal of Instruction*, 3(1), 77-100.
- Kumari, B. V. & Rao, D. G. B. (2004). *Methods of teaching social studies*. New Delhi, India: Dynamic Printer Delhi.
- Kyriacou, C. (2009). *Effective teaching in schools: Theory and practice* (3rd ed.). Cheltenham, UK: Nelson Thornes Ltd.
- Lynch, M. (2016, September 2). For pre-service teachers: the eight goals every field experience should achieve. *The Advocate*. Retrieved from <https://www.theadvocate.org/pre-service-teachers-eight-goals-every-field-experience-achieve/>
- Mahmud, I. & Rawshon, S. (2013). Microteaching to improve teaching method: An analysis on Students' perspectives. *IOSR Journal of Research & Method in Education*, 1(4), 69-76.
- Meutia, P. D., Elyza, F., & Yusnila, Y. (2018). Pre-service teachers' performance post microteaching class in field experience program. *Englisia: Journal of Language, Education, and Humanities*, 5(2), 102-114.
- Morse, B. J., & Popovich, P. M. (2009). Realistic recruitment practices in organizations: The potential benefits of generalized expectancy calibration. *Human Resource Management Review*, 19(1), 1-8.
- Najjah, W. I. S (2014). *Pengaruh nilai micro teaching terhadap kemampuan mengajar praktek pengalaman lapangan (PPL) mahasiswa S1 program studi Tadris Biologi Angkatan 2010 Fakultas Ilmu Tarbiyah dan Keguruan IAIN Walisongo Semarang*. (Bachelor's thesis), IAIN Walisongo, Semarang, Indonesia.
- Parkay, F. W., & Standord, B. H. (2011). *Becoming a teacher: Student value edition* (8th ed). London, UK: Pearson.
- Remesh, A. (2013). Microteaching, an environment friendly method for getting to know effective teaching. *Journal of Research in Medical Sciences*, 18(2), 158-163.
- Saban, A., & Coklar, A. N. (2013). Pre-service micro-teaching approach in teaching practice classes. *The Turkish Online Journal of Educational Technology*, 12(2), 234-240.
- Vagi, R., Pivovarova, M., & Barnard, W. (2019). Dynamics of preservice teacher quality. *Teaching and Teacher Education*, 85, 13-23
- Volet, S., Jones, C., & Vauras, M. (2019). Attitude-, group- and activity-related differences in the quality of preservice teacher students' engagement in collaborative science learning. *Learning and Individual Differences*, 73, 79-91.
- Widiarini, I. A. K., Tripalupi, L. E., & Meitriana, M.A. (2015). Hubungan hasil belajar mata kuliah Micro Teaching (PPL I) dengan hasil belajar Program Pengalaman

Lapangan (PPL II) mahasiswa Jurusan Pendidikan Ekonomi pada semester genap tahun akademik 2013/2014 dan semester ganjil tahun akademik 2014/2015. *Jurnal Jurusan Pendidikan Ekonomi Undiksha*, 5(1).

Widiastuti, A. (2011). *Faktor-faktor yang mempengaruhi kompetensi guru IPS SMP di Kabupaten Sleman*. (Master's thesis), Universitas Negeri Yogyakarta, Yogyakarta, Indonesia.