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The teaching readiness of pre-service teachers from the economics and business education programs

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ABSTRACT

This study aims to examine the teaching readiness level of pre-service teachers from the Economics Education, Accounting Education, and Office Administration Education study programs and the discrepancy between them. Ex post facto research design was applied in this study with quantitative approach. Pre-service teachers from educational study programs in the Faculty of Economics Universitas Negeri Yogyakarta that have completed micro teaching and educational practice courses were involved as the population in the present study. A total of 262 pre-service teachers were selected as the samples using purposive random sampling method. A questionnaire was used to collect the data. The instrument validity was confirmed using exploratory factor analysis, while the reliability was estimated using Cronbach Alpha. The data were analyzed statistically using descriptive quantitative and Multivariate Analysis of Variance (MANOVA). The result showed that the teaching readiness of the pre-service teachers from the Economic Education, Accounting Education, and Office Administration Education study programs were in the "excellent" category, and no significant differences were found on their teaching readiness level. The results indicated that each study program showed a similar performance in providing the pre-service teachers with an appropriate level of teaching readiness. Grounded on the research results, it is suggested to maintain the schooling pattern for all educational study programs for an in-depth study in the future with different characteristics of each study program.

Keywords: teaching readiness, pre-service teachers, Economics and Business

Article history

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INTRODUCTION

Education is the utmost important facility for quality human resources (HR) to ensure the survival and development of a nation. HR development is the most important aspect for any organization, including a country since humans are undoubtedly a driving force for the development (Okoye & Ezejiofor, 2013). HR quality improvement is an urgent issue to be realized to face the global era. HR improvement cannot be separated from how the HR received an education, in which the better the education they receive the more the competence of the HR can be relied upon. Higher education is expected to produce professional labor to supply the community demand for professional labor. In addition, higher education is expected to produce professional graduates as a future pillar for the nation to carry on the educational development.

The Teacher Training Institute (locally known as Lembaga Pendidikan Tenaga Kependidikan- LPTK) is a higher education that leads to produce professional labors in educational field. The success of LPTK higher education highly determines the quality of SMA/MA (Senior High School/ Islamic Senior High School) graduates who pursue their study and SMK (Vocational High School) graduates who work in their area of expertise. The teaching readiness of the pre-service teachers during the end of their education will determine the readiness of the graduate candidates/teacher candidates to conduct a teaching and learning activity for a successful learning.

The number of LPTK graduates does not guarantee the quality produced. Therefore, an in-depth study is needed to improve the quality of LPTK graduates. In this vein, LPTK needs a proper process and facility to produce professional labor. The good or bad quality of the graduates is indirectly affected by the learning activity conducted by the LPTK.

The general parameter for the teaching readiness can be seen from the achievement of several teacher competencies by the pre-service teachers, which include the pedagogy, personality, social, and professional competencies (Lunenberg, Dengerink, & Korthagen (2014: 5). A properly conducted learning activity is a determining factor highly expected from an LPTK to function as an institute for teacher training. An appropriate learning process by an LPTK is needed to produce an educator suitable with the predetermined standard. The appropriateness of the competencies achieved by pre-service teachers is highly determined by the learning and curriculum used to teach the pre-service teachers.

As a higher education in charge of future educator training, it is necessary for LPTK to be more committed in ensuring teaching readiness of its graduates. The teaching readiness is believed to be constructed from an interaction between physical and psychological readiness (Soemanto, 2007:186). A new light for LPTK as a driving force for teacher training has been shed after LPTK is being mandated to conduct a Teacher Profession Education Program (known as Program Pendidikan Profesi Guru-PPG in the Indonesian context). However, LPTK Higher education especially the educational study programs are able to provide a solid foundation for a future teacher in Indonesia. Studies related to the teaching readiness of LPTK graduates have been widely conducted, but mostly limited to the study of the factors affecting the teaching readiness (M Munir, 2022). The present study hopefully offers theoretical and practical contributions to the aspects that need to be improved for a better readiness of the pre-service teachers.

Universitas Negeri Yogyakarta (UNY) is one of the LPTK as an educational labor provider that will endow educational labor in the senior high school, vocational high school, and Islamic senior high school levels that covers such as, but not limited to the Economics, Accounting, and Office Administration fields. LPTK indirectly holds a great responsibility in preparing for a professional educator. A study by Wolff et a. (2007) found that the development of teacher's professionalism is a method to improve the teaching quality and increase the perception of the professional teacher status, work satisfaction, self-efficacy, and contribute to the development of sustainable education. According to Lunenberg, Dengerink, and Korthagen (2014:5), a professional teacher is a teacher who is able teach or educate the students with a goal to support their professional development. However, it is worth noting that the students' learning achievement also significantly contributes to the success of producing a professional educator (Avalos:2011). The implementation of the learning process refers to the standard on the several competencies needed for an educator as arranged in the curriculum of each study program pursued by the pre-service teachers (Hudson.S & Hudson. P: 2009).

Study programs that prepared their graduates as an educator or a teacher in the Economics and Business field are Economics Education, Accounting Education, and Office Administration Education study programs. While following the teaching and learning process, the students' characteristics from each of those study programs tend to be identical, but their input qualities are diverse. Accounting Education study program is reported to have a better input quality than the others. Those educational study programs focus on providing the essential competencies required for pre-service teachers to be a professional teacher. According to Graham et al (2019), there are several indicators of the teaching readiness, namely (1) foundational knowledge, skills, and dispositions, (2) learning planning, (3) learning method and strategy, (4) assessment and evaluation, and (5) management. In addition, Graham et al. (2019) further argued that teacher readiness is influenced by foundational knowledge, skills, and dispositions. The curriculum of the educational study programs should be adjusted to the educational indicators that provide teaching understanding and skills and the preparation of learning administration (Sardiman, 2016). In this sense, it is expected that the curriculum can provide the pre-service teachers to be ready-to-teach graduates in the future. It is in line with study conducted by Manasia, Ianos, and Chicioreanu (2020) reporting that procedural knowledge about curriculum is one of the significant factors affecting the formation of teaching readiness and professionalism of the prospective teachers.

In order to implement the curriculum, an appropriate supporting facilities and infrastructure for learning activities are highly required (Anar, Peretson & Vilancca, 2017), such as the provision of learning facilities, library, and micro teaching laboratory. The teaching skill of the pre-service teachers is also strengthened with the implementation of micro teaching practice and educational practice (locally known as Praktik Kependidikan- PK). However, the level of teaching readiness

of the pre-service teachers after completing the courses from the theoretical lectures to the educational practice has yet to be explored to date. In some cases, inputs are received from the graduate users/schools related to the teaching readiness of the pre-service teachers during the implementation of educational practice. It implies that the achievement of the pre-service teachers' competencies and the implementation of learning to prepare the teaching competence of the pre-service teachers have yet to be optimally managed. The result of Okoye and Ezejiofor (2013) study reported that the teaching competencies proficiency in the pre-service teachers needed to be improved. Therefore, the present researchers were interested in examining the teaching readiness level of the pre-service teachers that had completed their theoretical courses and micro teaching and PK.

METHOD

The present study was an ex-post facto research since the research only scrutinized the fact without any manipulation of the variable or fabricating any particular circumstance. Based on its nature, the present study was included as descriptive quantitative research since it intended to report the real condition using numerical data and the data were interpreted based on the applicable parameter. A quantitative approach was applied in this study since the data were in numbers and analyzed statistically.

The research population involved a total of 295 pre-service teachers of the educational study programs in the Faculty of Economics UNY with qualified characteristics of having completed micro teaching and educational practice. Simple random sampling technique was used, and a total of 262 pre-service teachers were selected as the research samples.

To collect the data, an e-questionnaire was used in the present study with a close ended questionnaire style as the instrument. The questionnaire used in this study was referring to the Likert scale modified with four alternatives answers from the very positive to very negative answer. The development was conducted by identifying the indicator of each variable and arranging the questionnaire outline based on the indicator. The questionnaire validity was verified using exploratory factor analysis, while the checklist validity was verified using expert judgement. The steps of factor analysis include: (1) testing the analysis feasibility, (2) presenting correlation matrix, (3) extracting, (4) rotating, and (5) determining the factors and items. The reliability of the questionnaire instrument was estimated using Cronbach Alpha formula. The outline of the research instrument and the result of validity test is presented in Table 1.

Table 1. Outline of the research instrument

Variable	Indicator	Valid item	Invalid item
Teaching readiness	Planning a learning	1,2,3	-
	Opening and closing a learning	5,6,7	4
	Preparing a learning scenario	9,10,11	8
	Managing learning	12,13,14,15,16	17
	Using learning media	18,19, 21	20
	Assessing a learning	23,24,25	22
	Facilitating interaction among the students	26,27	28,29
	Facilitating interaction between students and the teacher	30,31	32,33
	Facilitating interaction between students and the material	34,35, 36	37
	Integrating ICT in learning	38,39,40,41,42	-
	Total	32	10

Source: (Panduan Pengajaran Mikro UNY, 2011; Graham et al, 2019; Mohamed, Valcke & De Wever, 2017)

Table 1 indicates that there are 32 valid items and 10 invalid items of the questionnaire. The 10 invalid items were cut by the researchers since the remaining items were sufficient to represent the indicators to be measured. The construct validity was measured from the score of the loading factor obtained. The item was considered to have a good construct validity if the score was higher than 0.3. In addition, the result of the estimated reliability showed that the questionnaire on the teaching readiness of the pre-service teachers in the economics and business field obtained an Alpha index of 0.933 that indicated a considerably high reliability.
The data obtained from the field were analyzed using descriptive statistics to describe the teaching readiness level of the pre-service teachers in the economics and business field. Furthermore, the teaching readiness of the pre-service teachers was categorized using the calculation of the standard score referring to the ideal mean value and ideal standard deviation as presented in Table 2.

Table 2. Teaching Readiness Level

No	Formula	Score	Readiness
1	higher than (Mi + 1,5SD) to (Mi + 3SD)	higher than 3,25 to 4,00	Excellent
2	higher than (Mi) to (Mi + 1,5SD)	higher than 2,50 to 3,25	Good
3	higher than (Mi – 1,5SD) to (Mi)	higher than 1,75 to 2,50	Average
4	(Mi – 3SD) to (Mi – 1,5SD)	1,00 to 1,75	Poor

Source: Wagiran (2015)

In addition, Multivariate Analysis of Variance (MANOVA) was applied to test the hypothesis on the difference of the teaching readiness level of the pre-service teachers in the educational study programs related to the economics and business field. This analysis was used to test whether any mean differences were found in two or more dependent variables simultaneously based on the categories of the independent variable (Mardapi:2017). It is in accordance with the present study, in which the analysis was used to test the mean score of the teaching readiness from the pre-service teachers studying in the three educational study programs related to the economics and business field. Null hypothesis was rejected if the value of Fvalue was higher than Ftable or Sig<0.05.

RESULT

The Teaching Readiness Level of the Pre-service Teachers from the Economics Education Program

Descriptive statistics analysis was applied to generally describe the statistical measurement of the research result data. Table 3 presents the summary of the descriptive statistics analysis results on the teaching readiness level of the pre-service teachers from the Economics Education program.

Table 3. The Teaching Readiness Level of the Pre-service Teachers from the Economics Education Program

No	Measurement	Score
1	Mean	3.38
2	Median	3.34
3	Mode	3.41
4	Variance	0.116
5	Standard deviation	0.340
6	Minimum	2.53
7	Maximum	4.00

Table 3 shows that the mean score of the teaching readiness level from the Economics Education Program's pre-service teachers was in the excellent category. The three central tendency measurements (mean, median, mode) presented a similar score, which indicated that the

data were distributed normally. The highest score of the teaching readiness level from the Economics Education Program's pre-service teachers was 4.00 and the lowest was 2.53. Therefore, it implied that the teaching readiness level of the pre-service teacher was in the excellent category and equally distributed to all pre-service teachers.

The research result also showed the teaching readiness level from each indicator. Table 4 presents the teaching readiness level from the Economics Education Program's pre-service teachers as can be seen from the score of each indicator. Based on the score result, the data analysis was followed by categorization of the teaching readiness level from the Economics Education Program's pre-service teachers as presented in Table 4.

Table 4. The Teaching Readiness Level of the Pre-service Teachers from the Economics Education Program

No	Indicator	Score	Category
1	Planning a learning	3.48	Excellent
2	Opening and closing a learning	3.52	Excellent
3	Preparing a learning scenario	3.42	Excellent
4	Managing learning	3.47	Excellent
5	Using learning media	3.16	Good
6	Assessing a learning	3.44	Excellent
7	Facilitating interaction among the students	3.01	Good
8	Facilitating interaction between students and the teacher	3.26	Excellent
9	Facilitating interaction between students and the material	3.36	Excellent
10	Integrating ICT in learning	3.40	Excellent

Table 4 signifies that the teaching readiness level from the Economics Education Program's pre-service teachers was mostly included into "excellent" category. The indicators that were categorized as excellent namely planning a learning, opening and closing a learning, preparing a learning scenario, managing a learning, assessing a learning, facilitating interaction between students and the teacher, facilitating interaction between students and the material, and integrating ICT in a learning. The other two indicators, namely using learning media and facilitating interaction among the students were in the "good" category.

The Teaching Readiness Level of the Pre-service Teachers from the Accounting Education Program

Table 5 summarizes the descriptive statistics analysis result of the teaching readiness level from the Accounting Education Program's pre-service teachers.

Table 5. The Teaching Readiness Level of the Pre-service Teachers from the Accounting Education Program

No	Measurement	Score
1	Mean	3.41
2	Median	3.44
3	Mode	3.59
4	Variance	0.109
5	Standard deviation	0.330
6	Minimum	2.53
7	Maximum	4.00

Table 5 identifies that the teaching readiness level from the Accounting Education Program's pre-service teachers was categorized as good. The scores of the three central tendency measurements were quite similar, which indicated that the data were distributed normally. The highest score of the teaching readiness level from the Accounting Education Program's pre-service teachers was 4.00, while the lowest was 2.53, which inferred that the teaching readiness

level of the pre-service teachers was categorized as excellent and equally distributed to all pre-service teachers.

The result also reported the teaching readiness level from each indicator. Table 6 shows the teaching readiness level from the Accounting Education Program's pre-service teachers as can be seen from the score of each indicator. Based on the score result, the data analysis was followed by categorization of the teaching readiness level from the Accounting Education Program's pre-service teachers as presented in Table 6.

Table 6. The Teaching Readiness Level of the Pre-service Teachers from the Accounting Education Program

No	Indicator	Score	Category
1	Planning a learning	3.57	Excellent
2	Opening and closing a learning	3.54	Excellent
3	Preparing a learning scenario	3.49	Excellent
4	Managing learning	3.48	Excellent
5	Using learning media	3.15	Good
6	Assessing a learning	3.40	Excellent
7	Facilitating interaction among the students	3.10	Good
8	Facilitating interaction between students and the teacher	3.37	Excellent
9	Facilitating interaction between students and the material	3.39	Excellent
10	Integrating ICT in learning	3.42	Excellent

Table 6 shows that the teaching readiness level from the Accounting Education Program's pre-service teachers was mostly categorized as excellent. The indicators that were categorized as excellent namely planning a learning, opening and closing a learning, preparing a learning scenario, managing a learning, assessing a learning, facilitating interaction between students and the teacher, facilitating interaction between students and the material, and integrating ICT in a learning. The other two indicators, namely using learning media and facilitating interaction among the students were categorized as good.

The Teaching Readiness Level of the Pre-service Teachers from the Office Administration Education Program

The summary of the descriptive statistics analysis from the teaching readiness level of the Office Administration Education program's pre-service teachers is presented in Table 7.

Table 7. The Descriptive Statistic from the teaching readiness level of the Office Administration Education Program's Pre-service Teachers

No	Measurement	Score
1	Mean	3.30
2	Median	3.28
3	Mode	3.00
4	Variance	0.119
5	Standard deviation	0.345
6	Minimum	2.50
7	Maximum	4.00

Table 7 indicates that the teaching readiness level from the Office Administration Education Program's pre-service teachers was in the "excellent" category. The scores of the three central tendency measurements were quite similar, which indicated that the data were distributed normally. The highest score of the teaching readiness level from the Accounting Education Program's pre-service teachers was 4.00, while the lowest was 2.50. The result also reported the teaching readiness level from each indicator. Table 6 shows the teaching readiness level from the

Accounting Education Program's pre-service teachers as can be seen from the score of each indicator. Table 8 presents the teaching readiness level of the Office Administration Education Program's pre-service teachers as identified by the score of each indicator.

Based on the score result, the data analysis was followed by a categorization of the teaching readiness level from the Office Administration Education Program's pre-service teachers as presented in Table 8.

Table 8. The Categorization of Teaching Readiness Level from the Accounting Education Program's Pre-service Teachers

No	Indicator	Score	Category
1	Planning a learning	3.40	Excellent
2	Opening and closing a learning	3.43	Excellent
3	Preparing a learning scenario	3.31	Excellent
4	Managing learning	3.39	Excellent
5	Using learning media	3.07	Good
6	Assessing a learning	3.34	Excellent
7	Facilitating interaction among the students	2.92	Good
8	Facilitating interaction between students and the teacher	3.20	Good
9	Facilitating interaction between students and the material	3.31	Excellent
10	Integrating ICT in learning	3.34	Excellent

Table 8 shows that the teaching readiness level from the Office Administration Education Program's pre-service teachers was mostly categorized as excellent. The indicators that were categorized as excellent namely planning a learning, opening and closing a learning, preparing a learning scenario, managing a learning, assessing a learning, facilitating interaction between students and the material, and integrating ICT in a learning. The other indicators, namely using learning media, facilitating interaction between students and the teacher, and facilitating interaction among the students were categorized as good.

The Teaching Readiness Level of the Pre-service Teachers from All Educational Study Programs

The previous discussion sections had reported the descriptive statistics analysis result of each study program, then this section reported the descriptive statistic result for all Educational Study Programs related to the Economics and Business field. Those study programs include the Economics Education, Accounting Education, and Office Administration Education Study Programs. Table 9 presents the summary of descriptive statistics analysis result from the teaching readiness level of the pre-service teachers from the economics and business-related educational study programs.

Table 9. The Teaching Readiness Level of the Pre-service Teachers from All Educational Programs

No	Measurement	Score
1	Mean	3.37
2	Median	3.34
3	Mode	3.28
4	Variance	0.115
5	Standard deviation	0.340
6	Minimum	2.50
7	Maximum	4.00

Table 9 shows that the teaching readiness level of the pre-service teachers from all educational study programs was categorized as excellent. The scores of the three central tendency measurements were quite similar, which indicated that the data were distributed normally. The

highest score of the teaching readiness level of the pre-service teachers from all educational study programs related to the economics and business field was 4.00, while the lowest was 2.53, which inferred that the teaching readiness level of the pre-service teachers was categorized as excellent and equally distributed to all pre-service teachers.

The result also reported the teaching readiness level from each indicator. Table 10 presents the teaching readiness level of the pre-service teachers from all educational study programs related to the economics and business field as can be seen from the score of each indicator. Based on the score result, the data analysis was followed by a categorization of the teaching readiness level of the pre-service teachers from all educational study programs related to the economics and business field as presented in Table 10.

Table 10. The Teaching Readiness Level of the Pre-service Teachers from the Economics and Business-related programs

No	Indicator	Score	Category
1	Planning a learning	3.49	Excellent
2	Opening and closing a learning	3.50	Excellent
3	Preparing a learning scenario	3.42	Excellent
4	Managing learning	3.45	Excellent
5	Using learning media	3.13	Good
6	Assessing a learning	3.40	Excellent
7	Facilitating interaction among the students	3.02	Good
8	Facilitating interaction between students and the teacher	3.29	Excellent
9	Facilitating interaction between students and the material	3.35	Excellent
10	Integrating ICT in learning	3.39	Excellent

Table 10 shows that the teaching readiness level of the pre-service teachers from all educational study programs related to the economics and business field was mostly categorized as excellent. The indicators that were categorized as excellent namely planning a learning, opening and closing a learning, preparing a learning scenario, managing a learning, assessing a learning, facilitating interaction between students and the teacher, facilitating interaction between students and the material, and integrating ICT in a learning. The other indicators, namely using learning media, and facilitating interaction among the students were categorized as good. Figure 1 displays the mean score of the teaching readiness level from all educational study programs.

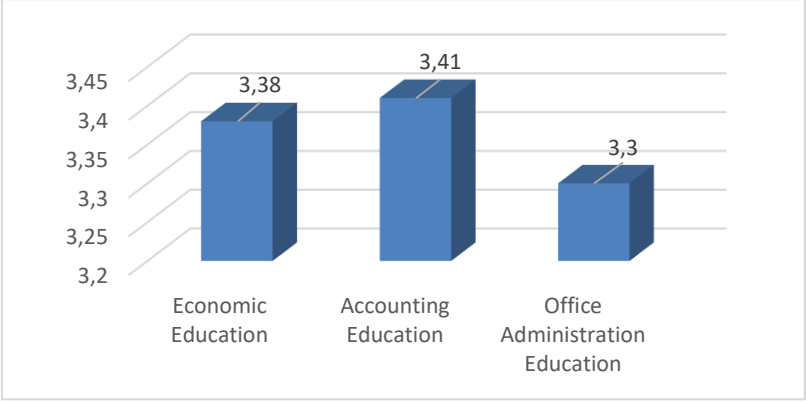

Figure 1. The Mean Score of the Pre-service Teachers' Teaching Readiness

The Differences of the Teaching Readiness Level from Each Study Program's Pre-service Teachers

To analyze the differences of the teaching readiness level from each study program's pre-service teachers, MANOVA was used in this study. This analysis was used to test the mean differences of the teaching readiness level from three study programs' pre-service teachers

simultaneously. A covariance homogeneity test using Box's M test was conducted before MANOVA analysis was applied. Table 11 presents the Box's M analysis result.

Table 11. Box's Test of Homogeneity of Covariance Matricesa

Box's M	159.305
F	1.133
df1	132
df2	157339.176
Sig.	.140

a. Design: Intercept + PRODI

The result of covariance homogeneity test using Box's M test showed that the Box's M value was 159.305 with F value of 1.133 and Sig. value of 0.140. Because the Sig. value 0.140 > 0.05, it can be inferred that the score of the teaching readiness level of the pre-service teachers from all educational study programs related to the economics and business field showed a homogeneous covariance, thus the multivariate analysis could be resumed. A hypothesis test using MANOVA was aimed to discover the differences of the teaching readiness level of the pre-service teachers from the educational study programs related to the economics and business field. The null hypothesis was 'there is no significant difference found on the teaching readiness level of the pre-service teachers from the educational study programs related to the economics and business field.' The hypothesis test using MANOVA is presented in Table 12.

Table 12. Multivariate Tests

Differences Source	Statistics Test	Value	F	Sig	Description
Program	Wilks' Lambda	0,940	0,712	0,829	Not significant

The hypothesis test result showed that the Wilks' Lambda value was 0.940 with F value of 0.712 and Sig. value of 0.829. Because the Sig. value of 0.829 > 0.05, the null hypothesis was accepted. It can be concluded that in a significance level of 0.05, no significant difference was found on the teaching readiness level of the pre-service teachers from the educational study programs related to the economics and business field.

FINDING AND DISCUSSION

The research results reported that the teaching readiness level of the Economics Education Program's pre-service teachers was categorized as excellent. Most of the indicators were categorized as excellent, namely planning a learning, opening and closing a learning, preparing a learning scenario, managing a learning, assessing a learning, facilitating interaction between students and the teacher, facilitating interaction between students and the material, and integrating ICT in a learning. The other two indicators were categorized as good, namely using learning media and facilitating interaction among the students. In general, the pre-service teachers' teaching readiness level was in the excellent category. However, some indicators were found to get a score below the optimum, including the ability to create a creative learning media suitable with the students' characteristics, facilitate a small group of students' discussion, facilitate a small group of students' collaboration during a project-based learning, and assist the students to select relevant online and offline materials.

In addition, the result indicated that the teaching readiness level from the Accounting Education Program's pre-service teachers was categorized as excellent. The mean score of this program was the highest among other programs. Most indicators that were categorized as excellent namely planning a learning, opening and closing a learning, preparing a learning scenario, managing a learning, assessing a learning, facilitating interaction between students and the teacher, facilitating interaction between students and the material, and integrating ICT in a learning. The other two indicators that were categorized as good, namely using learning media and facilitating interaction among the students. Furthermore, the result showed that some

indicators were found to get a score below the optimum, which include using several types of questions while evaluating the learning outcomes, and facilitating a small group of students' collaboration during the project-based learning.

Moreover, the research results signified that the teaching readiness level from the Office Administration Education Program's pre-service teachers was in the "excellent" category. Most indicators that were categorized as excellent namely planning a learning, opening and closing a learning, preparing a learning scenario, managing a learning, assessing a learning, facilitating interaction between students and the material, and integrating ICT in a learning. Meanwhile, the other indicators were categorized as good, namely using learning media, facilitating interaction between students and the teacher, and facilitating interaction among the students. The research data showed that some indicators were found to get a score below the optimum, which include following the learning syntax sequentially based on the implemented learning model, using a variative learning media in accordance with the learning material, creating a creative learning media suitable with the students' characteristics, facilitating a discussion for a small group of students, facilitating a collaboration for small group of students during a project-based learning, and assisting the students to select relevant online and offline materials.

In this light, the research results showed that the general skills related to the use of media, ICT, and learning management were sufficient and that LPTK had facilitated the pre-service teachers' development, but an improvement remained needed for some skills particularly for the pre-service teachers from the educational study programs related to the economics and business field. It was intended for the pre-service teachers to be more ready to teach. First, the pre-service teachers need to follow the learning syntax sequentially based on the implemented learning model. Learning syntax is learning sequences or steps that must be followed during the learning implementation based on the model used. The implementation of learning that followed a learning syntax sequentially is in line with research by Andriani, Masykuri and Sukarmin (2021). Second, pre-service teachers need to facilitate a discussion for a small group of students. This small group discussion among the students could develop a collaboration and increase participation of each member in the group. A group discussion forum could encourage and develop collaborative learning (Adam & Coetzee, 2021).

Third, pre-service teachers are required to facilitate a collaboration for a small group of students during the implementation of project-based learning. A small group collaboration facilitated by the teacher during the completion of project-based learning could increase the learning quality (Caruso & Buhagiar, 2021). Similarly, Davies, de Graaff and Kolmos (2011) argued that project-based learning could improve the students' critical thinking, self-learning skills, lifelong learning, self-achievement, self-regulation, self-efficacy, communication skills and interpersonal skills. Fourth, pre-service teachers were obliged to help the students to select relevant online and offline materials (Slade et al :2019). It is in accordance with the current circumstances in which the learning resources for the students can be online or offline. As a future teacher, the pre-service teachers needed to provide their students with supportive learning resources (Dirgantoro, 2021).

Fifth, the pre-service teachers needed to improve their abilities in creating a creative and variative learning media suitable with the students' learning characteristics. It is in line with research by Ramdhani and Muhammadiyah (2015) reported that a planning of creative learning media would be immensely helpful for the students to achieve their learning objectives. In addition, the use of variative learning media in a learning process agrees with the result of Nuhayati et al (2021) research. Sixth, the pre-service teachers need to use various kinds of questions in evaluating the learning outcomes (Russo et al., 2021). The ability to evaluate a learning was among the essential aspects required to be mastered by the pre-service teachers (Okoye & Ezejiofor:2013). Moreover, the use of distinct types of questions was needed to make the evaluation questions hard to guess and to increase the objectivity of the test result. Some types of test questions that can be used in the learning evaluation include the correct-incorrect questions, multiple choice, matching questions, short answers, and essay (Callahan & Meixner, 2020).

Grounded on the results of the hypothesis test using MANOVA, it can be inferred that in a significance level of 0.05, no differences were found on the teaching readiness level of the pre-

service teachers from the educational study programs related to the economics and business field. It indicated that the teaching readiness quality of the pre-service teachers inclined to be sufficient (Mardapi, 2017). In other words, the learning process that prepared the pre-service teachers to be ready to teach, including the theoretical lectures, practical lectures, micro teaching, and educational practice were considered successful (Avalos, 2011). Referring to the research results and discussion, it is suggested to maintain the academic and non-academic education pattern in all educational study programs. In addition, it can be followed up by conducting more in-depth research based on each program's characteristics.

CONCLUSION

Taken as a whole, the teaching readiness level of the pre-service teachers from the educational study programs related to the economics and business field was categorized excellent with a mean score of 3.37. The mean score of the pre-service teachers' teaching readiness level from the Economic Education Program was 3.38, the Accounting Education Program was 3.41, and the Office Administration Education Program was 3.30, which made them categorized as excellent. An improvement was needed for some indicators of the teaching readiness level of the pre-service teachers from the educational study programs related to the economics and business field. The hypothesis test result using MANOVA showed that the Wilks' Lambda value was 0.940 with F value of 0.712 and Sig. value of 0.829>0.05. Therefore, it can be concluded that in significance level of 0.05, no differences were found on the teaching readiness level of the pre-service teachers from the educational study programs related to the economics and business field. The findings implied that similar output can be expected from similar input provided to the students. However, the present study was limited to the measurement of teaching readiness that only used the pre-service teachers' perceptions. Future research is suggested to use a more variative parameter, such as observation and peer assessment.

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