The Effect of Self-assessment and Motivation Toward Students' Performance in Practicum Classroom

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Abstract. The present study aimed at investigating the effect of self-assessment and learning motivation towards students' performance in practicum classroom. The study was designed in pretest and posttest Quasi Experimental with 2x2 factorial design. Three variables used in this study, namely self-assessment as an independent variable, students' learning motivation as a moderator variable, and students' learning performance as a dependent variable. Sixty students in the sixth semester of the Family Welfare Education study program, Universitas Pendidikan Ganesha were involved as the sample of this study. The students followed and joined practicum courses which were selected by using a randomly sampling technique. The samples were divided into four groups, namely 1) the control group with high motivation, 2) control group with low motivation, 3) experimental group with high motivation, 4) the experimental group with low motivation. Pre-test and post-test were the technique of data collection in this study. Self-assessment instrument was a research instrument used during the treatment, meanwhile performance assessment test was used for collecting the data during pre-test and post-test. The data were collected by conducting test to see the students' performance. Then, the obtained data were analyzed descriptively and inferentially using SPSS 25. The results of the study showed that 1) the effect on students' performance in practicum classroom between students who were taught by using self-assessment and conventional technique; 2) the significant effect on students' performance in practicum classroom between students who were taught by using self-assessment and conventional technique; 3) the interactional effect between the implementation of self-assessment and motivation on students' performance; 4) there is different on students' performance between students with high motivation who were taught using self-assessment and those who were taught by conventional technique; and 5) there is no different on students' performance between students with low motivation who were taught using self-assessment and those who were taught by conventional technique.

Keywords: Motivation · Practicum · Self-assessment · Students' Performance

1 Introduction

The rapid development of industrial demands is along with the phenomenon of 21st century learning model in education system. It influences the education system particularly

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for vocational education which tend to prepare skilled graduate as the goal of learning process. Kurniawan et al. (2020) state that vocational education can be changed dynamically and constantly along with the industrial development since it provides qualified graduates for public world of business or industry. As a part of educational system, vocational education has been long necessitated to prepare its graduates to have higher human resource quality for competing in various sectors to improve nation's economic development (Chang & Hsu, 2010; Setiyawami et al., 2020). Rusman et al (2012) ever state that hiring a qualified worker is inseparable from the input of educational process. Therefore, vocational education has an important role in developing human resources who are able to compete in the development of industrial era (Sudirtha et al., 2022).

Vocational education is supposed to allow its students to have an opportunity for developing their vocational knowledge and skills based on their specific area. Hiim (2017) states that the main task of vocational education is offering students a wide chance for exploring vocational knowledge and skills related to the occupation that they expect to be qualified. The opportunity can be realized by adjusting the occupational needs of the students and the real work experience related to their special skills requirement (Berman et al., 2020). A work world within a professional courses can be achieved by conducting practicum during the learning process since it is perceived as an integral part of vocational education to meet students occupational expectation (Ryan et al., 1996). Oviawe et al (2017) argue that facilitating students' skills development through a practicum can build the students with knowledges, skills, and attitudes for an effective employment of their specific occupational area. It indicates that vocational education is different from other educational levels which is purposed for developing qualified human resources through practicum as its integral part.

However, a different way of learning process offered by vocational education does not prevent it from the demands of 21st century learning. The vocational education is still required to conduct a learning process that reflects 21st century learning model. Coşkun and Deniz (2021) state that the rapid change of learning process of 21st century requires a sudden change towards learning environment, skills and competencies taught and built in all education levels. It means that the learning process needs to place students as the main learning subject where they have to participate dominantly and become more independent (Widyastuti & Utami, 2018). Placing students as an active and independent participant in the classroom is one of 21st century learning invention which indicates that the learning process is supposed to be students-centered learning (Novalinda et al., 2020). It can be seen that the learning process in vocational education needs to be transformed into students-centered learning process.

The recent issue shows that the difficulties is still faced by some vocational educators in transforming the conventional learning process into 21st century learning in vocational education. Mutohhari et al (2021) argue that several difficulties or challenges still appear during the implementing 21st century learning model in vocational education particularly in Indonesia. One of mentioned problems is students-centered learning and passive habits including the limited solving problem skills owned by students that affect their competences and learning performance (Nurtanto et al., 2021). It is relevant to the problem faced by educators in teaching practicum courses for 6th semester students of Family Welfare Education study program at Universitas Pendidikan Ganesha. It is

found out that the difficulties appeared from students' limitation in solving problem skills and their passive habits. It makes the educators face difficulty in implementing students-centered learning as 21st century learning model.

In order to achieve a success implementation of 21st century learning, teachers are able to implement students-centered learning through assessment process. Implementing 21st century can be achieved by combining learning activities and assessment process in the classroom (Purnomo & Munadi, 2005). Self-assessment is one of alternative ways that can be used by the educators in implementing students-centered learning since it allows students to evaluate their own works as a participation during the learning process. Harris and Brown (2013) state that self-assessment can be used for engaging and empowering students, developing students' self-regulation and metacognition, improving students' communication skills, and improving their understanding and learning performance by evaluating their work. It is relevant to the statement which indicates that self-assessment is beneficial in increasing students' academic and practical performance (Black & Wiliam, 2006; Brown & Harris, 2014).

Self-assessment reflects students-centered learning since it can be used to lead students become an active and independent participant in the classroom. Ross and Bruce (2007) reveal that self-assessment represents the integration of self-regulation, self-observation, and self-instruction through the process of evaluating own works. This definition supports the use of self-assessment in realizing students-centered learning process as 21st learning models since it represents self-regulation. Self-regulation gained by the students through self-assessment can improve their learning motivation that avoid them to be passive participants. Panadero et al (2012) argue that students become passive participants due to the lack of learning motivation in which it also influences because they are not able to self-regulate their learning process. It leads them to have less experience progress.

Talk about students' motivation, it has a crucial impact towards their learning performance. Motivation can be defined as a power to make someone do something in order to achieve the goal (Ratnawati et al., 2019; Santoso et al., 2017; Wardani et al., 2020).Crookes and Schmidt (1991) argue that motivation deals with students' goals in the learning activities. Students have willingness to reach their goals. In addition, Santoso et al. (2017) state that motivation is a basis to encourage students in doing something actively as well as taking part in the activity. Therefore, it indicates that motivation also has a vital role in the learning process in which it can lead the students to actively participate in the classroom for achieving the learning objectives reflected on their learning performance as well. It is along with the purpose of students-centered learning (Widana, 2017).

Wasis (2017) through his study revealed that self-assessment improved physics students' learning motivation that influenced students' understandings towards the physics materials taught. It was similar to the findings shown by Hartuti (2020) where mathematic students faced an improvement towards their learning motivation through the implementation of self-assessment. It was indicated by the increased number of students who got the passing grades and higher score during the examination after the self-assessment used as a treatment. In addition, Yang et al (2022) found out that the

English students who did online self-assessment frequently had a better learning performance in the classrooms. Based on those previous relevant studies, it can be said that self-assessment and students' motivation have a vital role in encouraging students to be active participants that lead them to have better learning performance. However, there is still limited study which focuses on this phenomenon. Relating to the problem that has been mentioned previously and considering that there is no recent study which discussed self-assessment, students' learning motivation, and students' learning performance in vocational education particularly in practicum courses joined by sixth semester students at Family Welfare Education in Universitas Pendidikan Ganesha. Therefore, this study is conducted to investigate the effect of self-assessment and students' learning motivation towards students' learning performance in practicum course at Family Welfare Education study program in Universitas Pendidikan Ganesha.

2 Methods

The study was designed in pretest and posttest Quasi Experimental with 2x2 factorial design. There were three research variables in this study; self-assessment as independent variable, students' learning motivation as moderator variable, and students' learning performance as dependent variable. There were 60 of sixth semester students of Family Welfare Education study program, Universitas Pendidikan Ganesha involved as the sample of this study. They were the students who joined practicum courses and selected by using randomly sampling technique. The selected students were divided into four groups, namely 1) control group with high motivation, 2) control group with low motivation, 3) experimental group with high motivation, 4) experimental group with low motivation. Pre-test and post-test were the technique of data collection in this study. Self-assessment instrument was a research instrument used during the treatment, meanwhile performance assessment test was used for collecting the data during pre-test and post-test. The data were collected by conducting test to see the students' performance. Then, the obtained data were analyzed descriptively and inferentially using SPSS 25. In this study, there were some hypotheses formulated, namely 1) there was different effect of Self-assessment and Conventional Techniques; 2) there was significant effect on students' performance in practicum classroom between students who were taught by using self-assessment and conventional technique; 3) there was an interactional effect between the implementation of self-assessment and motivation on students' performance.

3 Result and Discussion

After obtaining the data, then it was analyzed descriptively. The descriptive analysis showed that the mean score of students who were taught by using self-assessment was 80.67 with a standard deviation of 6.789, whereas the mean score of students who were taught by using the conventional technique was 74.50 a standard deviation of 6.991. On the other side, for students who were taught by conventional technique, the mean score of students with high motivation was 78.6, whereas the mean score of students with low motivation was 70.3. Besides, for the students who were taught by self-assessment, the mean score of students with high motivation was 85.6, whereas the mean score

Table 1. Different Effects of Self-assessment and Conventional Techniques

One-Way ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	570.417	1	570.417	12.012	.001
Within Groups	2754.167	58	47.486		
Total	3324.583	59			

of students with low motivation was 75.6. The effect of self-assessment was analyzed inferentially using SPPSS 25 as follows.

The effect on students' performance in practicum classroom between students who were taught by using self-assessment and conventional technique

Table 1 showed the result of the One-way ANOVA test. The significance value (Sig.) was 0.001 which was less than 0.05 ($F = 12.012$ and $p < 0.05$). It indicated that the H0 was rejected. It meant that the student's performance in the practicum classroom taught by self-assessment was different from students taught by the conventional technique. It can be summed up that there is a different effect on students' performance between students who were taught by using the self-assessment and those who are taught by the conventional method.

The significant effect on students' performance in practicum classroom between students who were taught by using self-assessment and conventional technique.

Table 2 showed the N-gain score for the two groups, namely the experimental and control groups. The mean score of N-gain for the control group using the conventional technique was 71.62 which was categorized into enough categories. On the other side, the mean score of N-gain for the experimental group using the self-assessment was 78.03 which was categorized into effective categories. It can be concluded that the implementation of self-assessment is effective to increase students' performance in practicum classroom.

The interactional effect between the implementation of self-assessment and motivation on students' performance.

Table 3 showed the result of Two Way ANOVA. The significant value between motivation and self-assessment was 0.019 which was lower than 0.05. It indicated that H0 was rejected. It meant that that there was an interaction effect between self-assessment and motivation toward students' performance in practicum classroom.

There is different on students' performance between students with high motivation who were taught using self-assessment and those who were taught by conventional technique.

Table 4 showed that the significant value was 0.002 which was lower than 0.05. It indicated that H1 was accepted. It meant that there was a difference on students' performance between students who were taught using self-assessment and those who were taught by conventional technique.

Table 2. Significance Effect of Self-assessment and Conventional Techniques

Descriptive					
	Group			Statistic	Std. Error
NGain_Score	Control	Mean		71.6262	1.18981
		95% Confidence Interval for Mean	Lower Bound	69.1927	
			Upper Bound	74.0596	
		5% Trimmed Mean		71.8479	
		Median		72.6667	
		Variance		42.470	
		Std. Deviation		6.51688	
		Minimum		58.14	
		Maximum		81.00	
		Range		22.86	
		Interquartile Range		9.50	
		Skewness		-.489	.427
		Kurtosis		-.397	.833
	Experimental	Mean		78.0302	1.15866
		95% Confidence Interval for Mean	Lower Bound	75.6604	
			Upper Bound	80.3999	
		5% Trimmed Mean		78.2496	
		Median		79.8333	
		Variance		40.275	
		Std. Deviation		6.34624	
		Minimum		63.50	
		Maximum		87.67	
		Range		24.17	
		Interquartile Range		8.98	
		Skewness		-.530	.427
		Kurtosis		-.521	.833

There is no different on students' performance between students with low motivation who were taught using self-assessment and those who were taught by conventional technique.

Table 5 showed that the significant value was 0.868 which was higher than 0.05. It indicated that H0 was accepted. It meant that there was no significant difference on students' performance between students who were taught using self-assessment and those who were taught by conventional technique.

Table 3. The interactional effect between the implementation of self-assessment and motivation on students' performance

Tests of Between-Subjects Effects					
Dependent Variable: Performance					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	954.776[a]	3	318.259	21.668	.000
Intercept	110477.222	1	110477.222	7521.538	.000
Motivation	166.254	1	166.254	11.319	.002
Self-assessment	145.394	1	145.394	9.899	.004
Motivation * Self-assessment	91.200	1	91.200	6.209	.019
Error	381.891	26	14.688		
Total	196550.000	30			
Corrected Total	1336.667	29			
a. R Squared = .714 (Adjusted R Squared = .681)					

Table 4. Differences on students' performance between high experimental and high control group

Multiple Comparisons						
Scheffe						
		Mean Difference (I-J)			95% Confidence Interval	
(I) Group	(J) Group		Std. Error	Sig.	Lower Bound	Upper Bound
High Experimental	High Control	.58000*	.14840	.002	.1874	.9826
*. The mean difference is significant at the 0.05 level.						

From the explanation above, it can be seen that the implementation of self-assessment give impact to students' performance in practicum classroom. It can be seen that the students who are taught by using self-assessment outperform than students who are taught by using conventional techniques. The implementation of self-assessment assists students to have better performance in practicum classroom.

The result of the present study is in line with a study conducted by Yan et asl. (2021). It is found that the implementation of self-assessment is effective to increase students' academic performance. There is significant effect of self-assessment on students' academic performance. In addition, In addition, Sharma et al. (2016) support that the implementation of self-assessment is suitable to increase students' performance.

Table 5. Differences on students' performance between low experimental and low control group

Multiple Comparisons						
Scheffe						
		Mean Difference (I-J)			95% Confidence Interval	
(I) Group	(J) Group		Std. Error	Sig.	Lower Bound	Upper Bound
Low Experimental	Low Control	.11300*	.14840	.868	.2764	.4765
*. The mean difference is significant at the 0.05 level.						

Besides, it is also helpful for students to develop self-directed learning skills in improving their critical thinking. Especially for the case of improving students' skills. It was found by Baniabdelrahman (2010) in the implementation of self-assessment which gave a positive effect on students' reading skills. Their reading skills were improved by implementing the self-assessment. Moreover, Karaman (2021) suggests the implementation of self-assessment which can give contribution to students' academic performance. It can boost students to be more aware with their learning as well as monitor what they have done (Andrade & Valtcheva, 2009).

4 Conclusion

The present study concludes that self-assessment along with the students' motivation contribute to students' performance. Self-assessment can boost students' performance in doing their practicum. The motivation also takes role in improving students' performance since higher motivation indicates better performance. It is suggested to use self-assessment in teaching and learning process to direct and monitor students themselves.

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