The Contribution of Vocational Students' Learning Discipline, Motivation and Learning Results

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ABSTRACT

A good vocational high school prepares students for developing capability of working independently, demonstrating professional attitude at work, and being productive which that require good learning results for the realization thereof. the learning results serve as the yardstick of students' success. The purpose of this article is to find out the contribution of factors influencing students' learning results comprising the learning discipline and motivation of vocational high school students. The sampling used was the industrial vocational high school students. The employment of path analysis was intended to find out the contribution of each variable. The results of the research showed that the learning discipline and motivation significantly contributed to students' learning. The high discipline elevated the learning motivation that leads up to the enhanced learning results.

Introduction

The purpose of vocational high school is to train students to develop productive and independent living skills, the ability to choose their own careers, to persevere and persist in competing with others, to adapt to a working environment and to demonstrate professionalism in the field of their (Undang-Undang Nomor 20 Tahun, 2003). The purposes can be realized when students' learning results are upheld by the competency of the graduates Asfani (2016). The learning results serve as an important yardstick of a significant education Tremblay (2012).

Based on the results of the research conducted at SMK Malang Raya the learning result is categorized as relatively low because several students have not attained the gradate standard. The frequent grade alteration lowers the learning process standard.

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Students' learning results are influenced by two factors, internal and external factors Narwoto (2012). Internal factor includes learning motivation, intelligence, physical condition, and so forth. Whereas, external factors comprise environment wherein students are such as family, school and community Anggraini (2016).

Disciplining students is of importance to enable students to learn regularly Ustun (2009), consistently while abiding by the existing rules that positively impact their performance toward the real world experiences Gorbunovs (2016).

Apart from discipline implementation, students need motivation to achieve high learning results. However, some of them are motivated to succeed in learning and making their utmost achievement Olivos (2016), Sumarmo (2008) and Anggraini (2017). Learning motivation is key to students' achieving now as well as in the future Elliott (2005) and Williams (2013).

Research Methods

The research employed quantitative design to find out direct and indirect influence on the learning discipline and motivation. The research subjects are grade 11 students of industrial vocational high school. The independent(X) and intervening (Y) variable is measured using questionnaires and the control variable (Z) using documentation in the form of students' cognitive result.

Research Result

The analysis of the data collected encompasses (1) data description, (2) pre-analysis test, and (3) path analysis. Descriptive analysis is conducted to shed light on the research results comprising maximum value, (*mean*), (*median*), modus, range, and deviation standard which can be seen in Table 1.

Table 1. Descriptive data

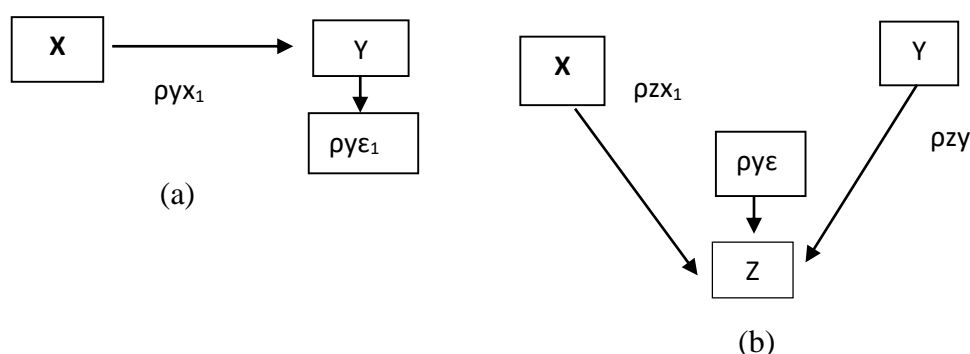| Variable	Max	Min	Mean	Median	Modus	Range	SD
X (Disiplin)	87	51	68,43	68.00	70	36	8.9
Y (Motivasi)	85	46	66,34	67.00	67	39	10.13
Z (Hasil Belajar)	91	45	72,28	73.00	84	46	10.23

Figure1. Path Analysis Diagram of the Initial Sub Structure (a), Second Sub Structure (b)

Prerequisite analysis is necessarily conducted to find out whether the data collected has met the requirement for an analysis using path analysis. It includes the normality test, linearity test, heteroskedasticity and multicollinearity. The causal relationship between variable X and Y, X and Y against Z can be seen in figure 1. The initial sub structure path analysis is used to look at the effect of variable X on variable Y simultaneously in Table 2.

Table 2. The initial sub structure path analysis

Model	Anova		Model Summary
	Sig	F	R Square
Regression	0.000	104.941	-
	-		.423

Based on Table 2 coefficient of determination that is obtained (Rsquare) is 0.423 signifying that the exogenous variable contribution simultaneously amounts to 42.3% with the remainder of 57.7% influenced by other factors. Besides, F value obtained is 104.941 with significant value of 0.000. Because the significant value is < 0.05 the simultaneous test has been fulfilled and followed by an individual test. The path analysis of the effect X on Y can individually be seen in Table 3.

Table 3. Individual test result of the initial sub structure

Model	Coefficients	
	Standardized coefficients (Beta)	sig
X	0.651	0.000

Based on Table 3 it is found out that the Standardized Coefficients of the discipline variable (X) against motivation (Y) stand at 0.651 that the direct influence of the learning discipline on the motivation is 42.3% and this equation is therefore obtained: $Y = 0.651X + 0,577 \varepsilon_1$

After conducting the initial sub structure test, the second sub structure follows. to see the contribution of the effect of variable X on Y and its effect on Z simultaneously can be seen in Table 4.

Table 4. Path analysis of the Second Sub Structure

Model	Anova		Model Summary
	Sig	F	R Square
Regression	0.000	88.528	-
	-		.555

Based on Table 4 the coefficient of determination obtained (Rsquare) is 0.555 which means that the contribution of exogenous variable simultaneously is 55.5% with the residual of 44.5% influenced by other factors. In addition, the F value of 88.528 has significant value of 0.000. Because the value is < 0. 05 the simultaneous test has been fulfilled and followed by an individual test. the path analysis of the effect X on Y can individually be seen in Table 3 and its effect on Z can individually be seen in Table 5.

Table 5. Individual Test Results of the First Sub Structure

Model	Coefficients	
	Standardized coefficients (Beta)	sig
X	0.651	0.000
Y	0.472	0.000

Based on Table 5 It can be discovered that the Standardized Coefficients of the discipline variable (X) on the learning results (Z) is 0.651. The discipline variable is known to hav e a direct effect on learning motivation by 42.3%.

Standardized Coefficients of the learning motivation variable (Y) on the learning results (Z) is 0.472 that it is found out that learning motivation contributes directly to learning results by 22.2%. The path relation of the effect of variable X on Y and on Z can be made through this structural equation:
Z= 0,651X+0,472Y+0,667 ε_2

Discussion

The analysis of the first sub structure proves that the learning discipline contributes positively to the increased learning motivation. The learning discipline is needed to enhance students' learning motivation Sutrisno (2016). Discipline in learning is a necessity for each and every one involved in the active learning Thoha (2016). the counseling function needs optimizing that the vocational high school students who are known for their misbehaving problems can be directed toward the better self-management. Vocational high school needs to improve the attitude, knowledge and skill to generate graduates of potential.

The analysis of the second sub structure shows that learning discipline contributes significantly to learning results through the enhanced learning motivation. The learning discipline contribution is 43.2% whereas learning motivation 22.2%. Students demonstrating high discipline will automatically develop motivation within that result in increased learning results.

Discipline contributes significantly to learning results Sutrisno (2016). High discipline is required for effective and efficient learning that leads to maximum learning Scubania (2014) and McDonald (2016). Suggestions are made concerning the efforts to improve learning results of vocational high school students as follows: directing students toward the development of discipline and learning responsibility. The school needs to expand the students' horizon on the importance of discipline that they may apply to themselves to face the real world challenges in industrial field.

Learning motivation constitutes an important factor that affects learning results Bakar (2014) and Suswanto (2017). Learning motivation serves as an efficient principle in education Kim (2011). Motivation is of significance to elevate the learning process William (2013) Those who have high motivation will result in good learning results Davoudi (2016 and Andartari (2013). Suggestions are made concerning is teachers are expected to optimize the condition for learning and develop students' skills for the future. Teachers motivate students to develop competitiveness and achieve even in the real world when they are in working life. Students must develop self-confidence to be successful and capable of competing in the industry because they have experiences, perseverance and professionalism.

Conclusion

Based on the discussion above, it can be concluded that firstly learning discipline contributes significantly to learning motivation and impacts the learning results. Learning discipline shows greater contribution than motivation because the discipline can increase the motivation which affects the learning results. Secondly, discipline contributes positively and significantly to learning motivation. Thirdly, discipline contributes positively to learning results. Fourthly, motivation contributes positively to learning results.

Disclosure statement

No potential conflict of interest was reported by the author.

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