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## **The Development of the Entrepreneurship Mindset for Vocational High School Student in Term of Technology by Learning Productive Side of Industry, Vocational Skill and Locus of Control**

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### **Abstract:**

*The aim of this research is to know direct correlation between: 1) The implementation of practical work (X2) with the vocational skill of vocational high school student (Z1), 2) The implementation in learning machinery in industry (X2) with Locus of Control of vocational high school student (Z2), 3) The Vocational skill of vocational high school student (Z2) with the entrepreneurship mindset of vocational high school student (Y1) and 4) Locus of Control of vocational high school student (Z1) with the entrepreneurship mindset of vocational high school student (Y1). The method which is used for processing data is developing the quality correlation in hypothesis and tested with zero hypothesis stating that regression coefficient among the relationship of two constructs is not different from zero by test-t such as in regression analysis. The research outcome shows that there is correlation significantly between X2 – Z1 with p-value 0,000 dan CR 0.787, X2 – Z2 with p-value 0,01 (> 0,05) and CR 0.558, Z2 – Y1 with p-value 0,016 and CR 0.629, Z1 – Y1 with p-value 0,005 (< 0,05) and CR 1.423. Practical work can make vocational skill and locus of control perfectly as provision to get the job in business and industry sectors.*

**Keywords:** *Practical work, locus of control, vocational skill, entrepreneurship mindset*

### **1. Introduction**

Practical work (PW) is the action in learning how to practice in industry sector or *teaching industry* (Mukhadis, 2009) is aimed to give vocational high school student such as : 1) the strong work character, 2) mastery of technology (*hard skill*), 3) mastery of work ethic, 4) time management, 5) adaptation, 6) interpersonal attitude (*soft skill*), and be opened with transformation by becoming ourselves firmly. Sudianto (2013) stated that practical work in industry has influenced the interest of student to be entrepreneur.

The various of education progresses have been achieved, for instance: enhancing gross participation or pure participation rate education and 6-year compulsory education program. However, it still seems the deficiency on graduation absorption; moreover, it is seen in very highly unemployment rate on the other hand.

Based on the data showed that unemployment rate in vocational high school particularly in 2013 for the national level is 11,21% and east java is 10,43%, in 2014 for national level is 11,24% and east java is 10,53% and in 2015 for national level is 12,65% and east java is 11,74%. From the data showed that unemployment rate for the graduation of vocational high school in 2013 to 2015 rose gradually, not only unemployment rate for national level but also for east java (BPS, 2013-2015). This situation is irony due to the fact that the graduation of vocational high school is prepared to fulfill the application. Therefore, one way which can be applied and be as solution is building emulative skill and entrepreneurship *mindset* for vocational high school student. It is like the statement from Senges (2007) in Rovi's research (2015), he said that the entrepreneur *mindset* describes about looking for the pattern innovatively and energetically, utilizing the chance and being involved in realizing to be entrepreneur.

Dharma (2010:14) and ILO (2005) said that a successful entrepreneur must have the triangle competence, those are knowledge, skill, and entrepreneurship character. Furthermore, Beni Bevely (2013) gave some characteristics of entrepreneurship *mindset*, such as: 1) to believe in getting profit and wealth is a grace, to be aware that each transactions and

business activities have high risk to get loss, 3) to give good service, to enhance dan create product and good service to customer, dan 4) to do correction and innovation continuously.

Vocational high school has developed vocational skill which is integrated with **productive matter**. Vocational skill is about student's competence that must be learned. The research result of Hidayati dan Suparno (2012), showed that there is positive correlation very significantly between vocational proficiency and entrepreneurship motivation. Moreover, the train of the vocational skill to make entrepreneurship *mindset* can be applied by giving **locus of control** for vocational high school student. If vocational high school student has good *locus of control*, so entrepreneurship *mindset* will be better. Both skill aspects will make emulative skill entrepreneurship *mindset* for vocational high school student. The characteristic of *internal locus of control*, as Crider (1983: 222) those are, 1) hard worker, 2) high initiative, 3) trouble solver, 4) opened minded, 5) having perception that business must be done if we want to be success.

**2. Method**

This research is quantitative research. And data analysis uses *Structural Equation Models (SEM)*. The Research arrangement uses correlational research. The main aim of correlational research is to determine whether two or more variable build one way making a correlation from observation result of the datum (Bordens, 2011). Whether it is strong or not the correlation among research variables which are measured with the value which is mentioned as correlation coefficient. Analysis is used to predict wanted causality correlation can be seen as direct correlation. The correlation among variables that will be tested in this research are the learning of productive side at school. The learning of productive side in industry/PW is as exogenous variable. Vocational skill and *locus of control* are as intervening variable. Besides emulative skill and entrepreneur *mindset* as endogenous variable. The measurement for research variable

Is explained on Figure 1.

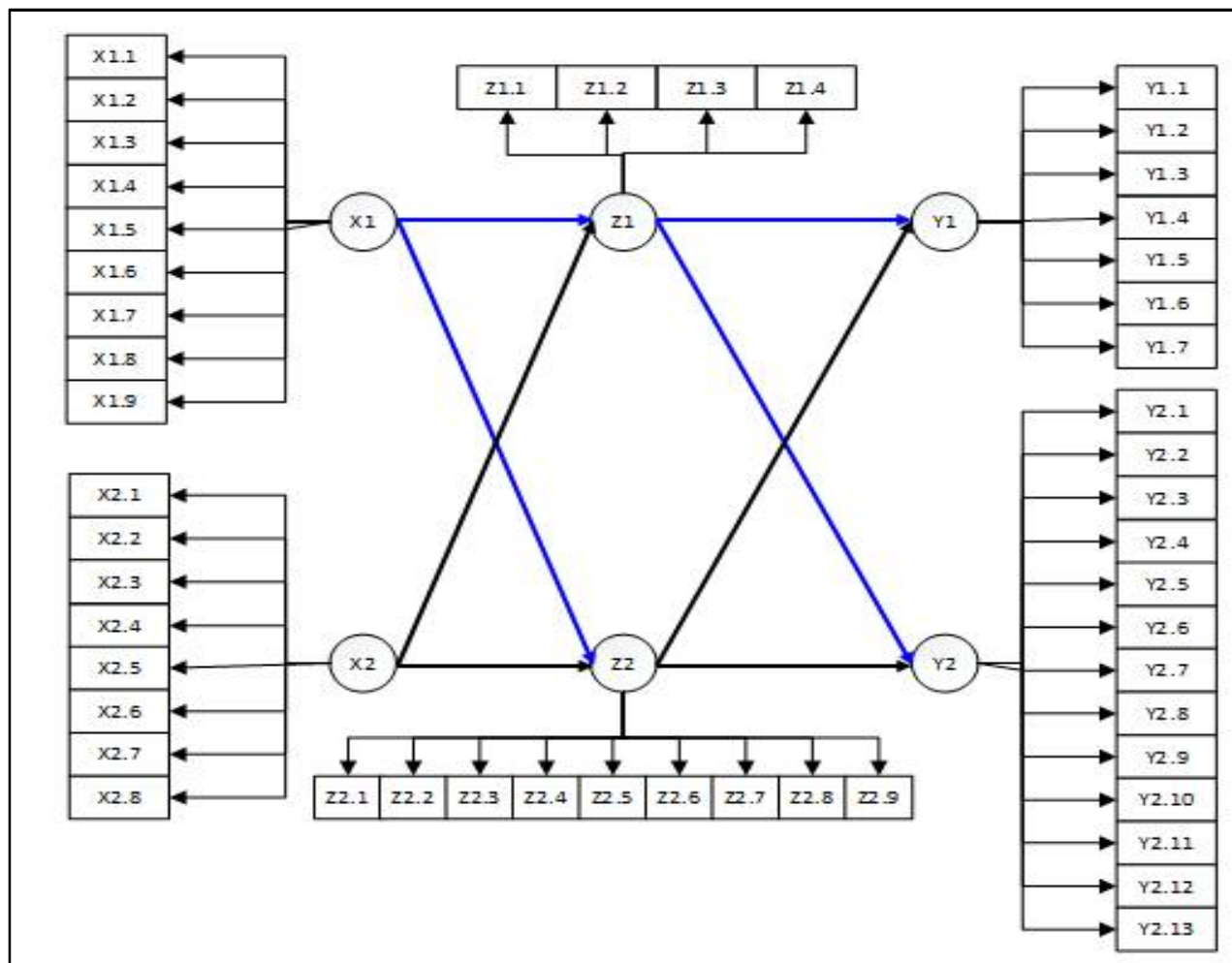


Figure 1: The Measurement Diagram for Research Variable

Picture caption:  
Tabel 1. Research Variable

<b>1. X1 = The implementation of productive learning at school</b>		
a.	X1.1	Teaching preparation
b.	X1.2	Mastery of learning material
c.	X1.3	Learning strategy
d.	X1.4	Utilization of Learning Media
e.	X1.5	The involvement of Student in learning
f.	X1.6	Process assessment and class output
g.	X1.7	Resume dan Feedback
h.	X1.8	Grow motivation entrepreneurship
i.	X1.9	School facility
<b>2. X2 = The implementation of learning in Industry</b>		
a.	X2.1	Orientation DUDI
b.	X2.2	Conduct practical work
c.	X2.3	Guidance instructor
d.	X2.4	Monitoring guidance teacher
e.	X2.5	Report arrangement
f.	X2.6	Oriented business needs
g.	X2.7	Grow the entrepreneurship willingness
h.	X2.8	Develop self-potential
<b>3. Z1 = Vocational Skill</b>		
a.	Z1.1	Job Exploitation
b.	Z1.2	Job Plan
c.	Z1.3	Self-assessment in choosing the job
d.	Z1.4	Make a decision to choose the job
<b>4. Z2 = Locus of Control</b>		
a.	Z2.1	Self-confident
b.	Z2.2	Solving problem skill
c.	Z2.3	Initiative
d.	Z2.4	Hard work
e.	Z2.5	Sturdy
f.	Z2.6	Self-satisfaction
g.	Z2.7	Less endeavor
h.	Z2.8	Less Confident
i.	Z2.9	Less Initiative
<b>5. Y1 = Emulative Skill</b>		
a.	Y1.1	Imaginative
b.	Y1.2	Feeling
c.	Y1.3	Intuitive
d.	Y1.4	Creative and Inovative
e.	Y1.5	Dare to take the risk
f.	Y1.6	Hard work
g.	Y1.7	Consistent
<b>6. Y2 = Entrepreneurship Mindset</b>		
a.	Y2.1	The difficulty level of the task (magnitude)
b.	Y2.2	Believe in ourselves
c.	Y2.3	Sturdy
d.	Y2.4	High desire
e.	Y2.5	Independence
f.	Y2.6	Quick respond for market opportunity
g.	Y2.7	Creative and Inovative concerning with entrepreneurship
h.	Y2.8	Dare to take the risk
i.	Y2.9	High work ethic
j.	Y2.10	Self-motivation to grow
k.	Y2.11	Be tuft to face obstacle
l.	Y2.12	Leadership
m.	Y2..13	Oriented for the future

Table 1

### 3. The Result and Discussion

Sampling technique which is used is *purposive sampling*. This technique is used based on the schools which become reference in city / district, such as: 1) SMKN 1 Driyorejo, 2) SMKN 3 Jombang, 3) SMKN1 Pungging, 4) SMKN 5 Surabaya, 5) SMK 3 Sidoarjo, dan 6) SMKN 1 Kalitengah.

Kolmogorov Smirnov's test is done to test normal distribution. If the data is proven as normal distribution, respondent proportion around average will be high, on the other hand, it will undergo proportion decline if shared data which is oneup to two times from deviation standard both below and above average. The score for variable is accounted from the average score of the entire items, Moreover, the score for sub variable is accounted from the average score of the item which is used in the sub variable. The average score is the measurement of the data centralization, and standard deviation is the measurement of the spreading data from average score. The higher standard deviation is interpreted that the bigger data diversity is or heterogent.

	ITEM	VALID	MISSING	MEAN	STD.DEVIATION	MIN	MAX
PI1	PI1.1	205	0	3,27	,635	1	4
PI2	PI2.2	205	0	3,28	,582	1	4
	PI2.3	205	0	3,30	,572	1	4
	PI2.4	205	0	3,18	,483	1	4
	PI2.5	205	0	3,20	,509	1	4
PI3	PI3.6	205	0	3,24	,647	1	4
	PI3.7	205	0	2,80	,667	1	4
PI4	PI4.8	205	0	3,07	,610	1	4
	PI4.9	205	0	3,01	,714	1	4
	PI4.10	205	0	2,93	,678	1	4
PI5	PI5.11	205	0	2,65	,931	1	4
	PI5.12	205	0	2,80	,989	1	4
	PI5.13	205	0	2,76	1,018	1	4
PI6	PI6.14	205	0	3,17	,630	1	4
	PI6.15	205	0	3,33	,600	1	4
	PI6.16	205	0	3,56	,526	2	4
	PI6.17	205	0	3,54	,555	2	4
PI7	PI7.18	205	0	3,26	,656	1	4
	PI7.19	205	0	3,34	,617	2	4
	PI7.20	205	0	3,22	,607	2	4
	PI7.21	205	0	3,32	,563	2	4
	PI7.22	205	0	3,19	,640	1	4
	PI7.23	205	0	3,42	,585	2	4
PI8	PI8.24	205	0	3,40	,598	2	4

Table 2: Variable Descriptive Statistic of Learning implementation in Industry Sector (Practical Work)

#### Information:

- PI1 = Oriented DUDI Introduction
- PI2 = Do Practical Work
- PI3 = Guidance Instructor
- PI4 = Monitoring Guidance Teacher
- PI5 = Report Arrangement
- PI6 = Oriented Business need
- PI7 = Grow Entrepreneurship
- PI8 = Grow Self-Potential

	ITEM	VALID	MISSING	MEAN	STD DEVIATION	MINIMUM	MAXIMUM
KV1	KV1.1	205	0	3,32	,597	1	4
	KV1.2	205	0	3,51	,565	1	4
	KV1.3	205	0	3,00	,711	1	4
	KV1.4	205	0	3,39	,572	1	4
	KV1.5	205	0	3,40	,631	1	4
	KV1.6	205	0	2,35	,982	1	4
KV2	KV2.7	205	0	3,25	,612	2	4
	KV2.8	205	0	3,18	,650	1	4
	KV2.9	205	0	3,13	,629	1	4
	KV2.10	205	0	3,15	,685	1	4
	KV2.11	205	0	3,13	,691	1	4
KV3	KV3.12	205	0	3,27	,637	1	4
	KV3.13	205	0	3,32	,579	1	4
	KV3.14	205	0	3,33	,662	1	4
KV4	KV4.15	205	0	3,27	,595	1	4
	KV4.16	205	0	2,65	,915	1	4
	KV4.17	205	0	3,20	,739	1	4
	KV4.18	205	0	3,21	,618	1	4
	KV4.19	205	0	3,11	,729	1	4
	KV4.20	205	0	3,23	,605	2	4

Table 3: Variable Descriptive Statistic of Vocational Skill

## Information:

KV1 = Job Exploration

KV2 = Job Plan

KV3 = Self-Assessment to choose The Job

KV4 = Make Decision to choose the Job

ITEM	VALID	MISSING	MEAN	STD DEVIATION	MINIMUM	MAXIMUM
LC1.1	205	0	3,02	,577	1	4
LC1.2	205	0	3,19	,581	2	4
LC1.3	205	0	3,11	,640	1	4
LC2.4	205	0	3,21	,602	2	4
LC2.5	205	0	3,00	,675	1	4
LC3.6	205	0	3,24	,641	1	4
LC3.7	205	0	3,23	,682	1	4
LC4.8	205	0	2,87	,752	1	4
LC5.9	205	0	3,29	,577	1	4
LC5.10	205	0	3,30	,615	1	4
LC5.11	205	0	3,24	,713	1	4
LC5.12	205	0	3,38	,619	2	4
LC6.13	205	0	3,34	,663	1	4
LC6.14	205	0	3,45	,613	2	4
LC7.15	205	0	3,00	,840	1	4
LC7.16	205	0	3,19	,877	2	4
LC7.17	205	0	2,86	,869	1	4
LC7.18	205	0	3,04	,901	1	4
LC8.19	205	0	2,97	,857	2	4
LC8.20	205	0	2,92	,788	1	4
LC8.21	205	0	2,92	,730	2	4
LC8.22	205	0	2,92	,763	2	4
LC8.23	205	0	2,85	,829	2	4
LC8.24	205	0	2,88	,721	2	4
LC8.25	205	0	2,82	,749	2	4
LC8.26	205	0	2,99	,942	1	4
LC8.27	205	0	2,75	,915	1	4

ITEM	VALID	MISSING	MEAN	STD DEVIATION	MINIMUM	MAXIMUM
LC8.28	205	0	2,79	,857	1	4
LC8.29	205	0	2,80	,838	1	4
LC8.30	205	0	2,89	,898	2	4
LC8.31	204	1	2,98	,915	2	4
LC8.32	205	0	3,00	,929	1	4
LC8.33	205	0	2,93	,918	1	4
LC9.34	205	0	2,74	,863	1	4
LC9.35	205	0	2,81	,825	1	4
LC9.36	205	0	2,76	,820	2	4
LC9.37	205	0	3,14	,886	1	4
LC9.38	205	0	3,08	,845	1	4

Table 4: Variable Descriptive Statistic of Locus of Control

Information:

- LC1 = Confident  
 LC2 = Solving Problem Skill  
 LC3 = Initiative  
 LC4 = Hard Work  
 LC5 = Sturdy  
 LC6 = Self-Satisfaction  
 LC7 = Less Attempt  
 LC8 = Less Confident  
 LC9 = Less Initiative

	ITEM	VALID	MISSING	MEAN	STD DEV	MINIMUM	MAXIMUM
MW1	MW1.1	205	0	3,09	,566	1	4
	MW1.2	205	0	3,28	,592	1	4
	MW1.3	205	0	3,37	,640	1	4
	MW1.4	205	0	3,35	,604	2	4
MW2	MW2.5	205	0	3,45	,536	2	4
	MW2.6	205	0	3,51	,599	1	4
	MW2.7	205	0	3,52	,582	1	4
MW3	MW3.8	205	0	3,50	,548	2	4
	MW3.9	205	0	3,49	,557	1	4
	MW3.10	205	0	3,36	,608	2	4
MW4	MW4.11	205	0	3,31	,560	2	4
	MW4.12	205	0	3,33	,583	1	4
MW5	MW5.13	205	0	3,36	,622	1	4
	MW5.14	205	0	3,29	,626	1	4
MW6	MW6.15	205	0	3,27	,613	1	4
	MW6.16	205	0	3,20	,672	1	4
MW7	MW7.17	205	0	3,23	,643	1	4
	MW7.18	205	0	3,40	,565	2	5
	MW7.19	205	0	3,35	,562	1	4
MW8	MW8.20	205	0	3,31	,610	1	4
	MW8.21	205	0	3,33	,624	1	4
MW9	MW9.22	205	0	3,32	,597	1	4
	MW9.23	205	0	3,27	,621	1	4
	MW9.24	205	0	3,40	,646	1	4
	MW9.25	205	0	3,22	,638	1	4
MW10	MW10.26	205	0	3,30	,669	1	4
	MW10.27	205	0	3,32	,658	1	4
	MW10.28	205	0	3,33	,646	1	4
	MW10.29	205	0	3,37	,663	1	4
	MW10.30	205	0	3,50	,631	1	4
	MW10.31	205	0	3,44	,597	1	4
	MW10.32	205	0	3,54	2,848	1	43

	ITEM	VALID	MISSING	MEAN	STD DEV	MINIMUM	MAXIMUM
	MW10.33	205	0	3,26	,641	1	4
	MW10.34	205	0	3,24	,639	1	4
	MW10.35	205	0	3,19	,614	1	4
	MW10.36	205	0	3,27	,619	1	4
	MW10.37	205	0	3,32	,643	1	4
MW11	MW11.38	205	0	3,32	,660	1	4
	MW11.39	205	0	3,46	,614	1	4
	MW11.40	205	0	3,31	,649	1	4
MW12	MW12.41	205	0	3,40	,608	1	4
	MW12.42	205	0	3,49	,566	2	4
	MW12.43	205	0	3,50	,548	2	4
MW13	MW13.44	205	0	3,49	,591	2	4
	MW13.45	205	0	3,50	,599	1	4

Table 5: Variable Descriptive Statistic of EntrepreneurshipMindset

Information:

- MW1 = The Difficulty Level of The Task (*Magnitude*)  
 MW2 = Believe in Ourselves  
 MW3 = Sturdy  
 MW4 = High Desire  
 MW5 = Independence  
 MW6 = Quick Respond for Market Opportunity  
 MW7 = Creative dan Inovative concerning with entrepreneurship  
 MW8 = Dare to face the risk  
 MW9 = High Work Ethic  
 MW10 = Self-Motivation to Grow  
 MW11 = Endurance to face Problem  
 MW12 = Leadership  
 MW13 = Oriented for the Future

### 3.1. Direct Effect among Variables

Causality correlation which is developed in hypothesis for this model is tested with zero hypothesis which stated that regression coefficient *among* correlation of two constructs is not different from zero with test-t such as there is in regression analysis. Statistic value of C.R will distribute with level as big as 193. This is description of a tested outcome for 7 sides in the last model that is exist in this research. Assessment of hypothesis in structural model is connected with test outcome of regression coefficient for each way which is produced and described in Table 3.5

Effect		Standard Coefficient	CR	P Value	Information
From	To				
Vocational Skill	Industry	2,756	0,787	3,504	Significant
Locus of Control	Industry	1,438	0,558	2,576	Significant
Entrepreneur Mindset	Vocational Skill	-1,514	0,629	-2,407	Significant
Entrepreneur Mindset	Locus of Control	3,965	1,423	2,787	Significant

Table 6: The Effect of Tested Result of Regression Coefficient among Variables in The Last Models

Hypothesis	Nil Hypothesis Statement	p-value	Tested Result Ho
1	There is no correlation between Learning Implementation in Industry Sector and Vocational Skill of Vocational High School Student	0,000	Refused
2	There is no correlation between Learning Implementation in Industry Sector and Locus of Control of Vocational High School Student	0,010	Refused
3	There is no correlation between Vocational Skill of Vocational High School Student and Entrepreneurship <i>Mindset</i> of Student	0,016	Refused
4	There is no direct correlation between Locus of Control of Vocational High School Student and Entrepreneurship <i>Mindset</i> Student	0,005	Refused

Table 7: Resume of Tested Result of Nil Hypothesis

a) Direct Correlation Between Learning Implementation in Industry Sector and Vocational Skill of Vocational High School Student.

The Correlation between learning implementation variable in industry sector and Vocational skill of Vocational high school student has produced a significant correlation with  $p$ -value 0,000

b) Direct Correlation Learning Implementation in industry sector with *Locus of Control* of Vocational High School Student  
 After being tested, it showed that there is no direct correlation significantly between learning implementation in industry sector and locus of Control. It was seen from tested result showed that regression coefficient is 1,438 with C.R. is 0,558 with  $p$ -value 0,01 ( $> 0,05$ )

c) Direct Correlation of Vocational Skill of Vocational High School Student with Entrepreneurship Mindset of Vocational High School Student

The Correlation between vocational skill variable and entrepreneurship mindset of vocational high school student creates a significant correlation with  $p$ -value 0,016

d) Direct Correlation of *Locus of Control* of Vocational High School Student with Entrepreneurship Mindset of Vocational High School Student

After being tasted, it was found that there is no direct correlation significantly between locus of control and entrepreneurship mindset. It was seen from tested result showed that  $p$ -value 0,005 ( $< 0,05$ ).

e) Final Model

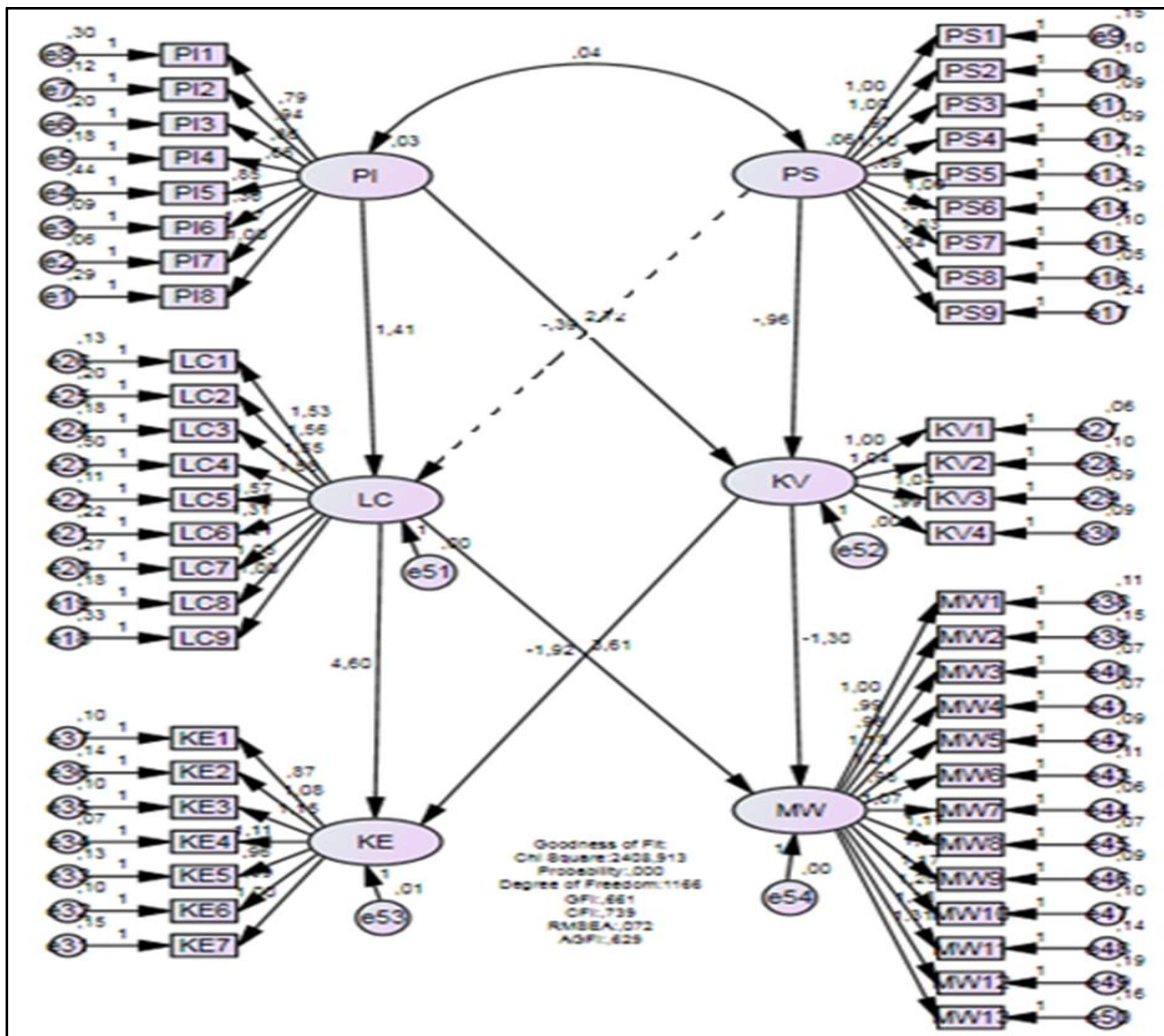


Figure 2: Final Model

Picture Description:

→ : Direct Correlation



- a. There is a correlation between learning implementation variable of productive side in industry sector or industrial practical work and vocational skill variable.
- b. There is a correlation between learning implementation of productive side in industry and *Locus of Control* variable of vocational high school student.
- c. There is a correlation between vocational skill variables and entrepreneurship *mindset* variable.
- d. There is a correlation between *Locus of Control* variable of vocational high school student with entrepreneur *mindset* variable.

#### 4. Conclusion

Conclusion which can be stated from research results are:

a) Learning implementation of productive side in machinery industry (Practical Work) (X2) has direct correlation significantly with Vocational Skill of Vocational High School Student (Z1). It was proven with p-value 0,000, it means that there is a direct correlation. Learning implementation of productive side in machinery industry (Practical Work) need to be applied very well, Due to the fact that learning implementation of productive side in machinery industry (Practical Work) can create Vocational skill of Student as provision of the student to reach the job in business or industry world fast and easily.

b) Learning implementation in machinery industry (X2) has a direct correlation significantly with *Locus of Control* of Vocational High School Student (Z2). It was proven p-value 0,01 it means that there is a direct correlation. In term of the learning implementation in machinery industry or PW needs to be applied very well, such as: the correlation in business or industry world. With learning implementation in machinery industry or PW perfectly will create student or the graduation which has *Locus of Control* very well too.

c) Vocational skill of vocational high school student (Z2) there is a direct correlation with Entrepreneurship *Mindset* of vocational high school student (Y1). It was proven with p-value 0,016, it means that there is a direct correlation. If the student has vocational skill very highly, so the student will have entrepreneurship mindset very well. If the student has entrepreneurship mindset very well, so the student will have motivation and interest very highly to be entrepreneur.

d) *Locus of Control* of vocational high school student (Z1) there is direct correlation significantly with entrepreneurship *Mindset* of vocational high school student (Y1). It was proven with p-value 0,005, it means that there is a direct correlation. *Locus of control* of vocational high school student is essential to be developed by many kinds of activities, particularly in term of Academic through learning implementation activity at school and in industry. The student who has *locus of control* very well will make entrepreneurship mindset very well, so the student will have motivation and interest to be entrepreneur as alternative to work.

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