

THE SANDWICH PROGRAM TO PURSUE NATIONAL QUALIFICATION FRAMEWORK(NQF) (Case Study : Stein Student at Work Place)

Parlagutan Silitonga

Introduction. A sandwich program has been long time applied in Germany. The compliance with pre-requisite and the application of competency standard in both entities are among the key success factors. In Indonesia, this program is easy to say, but difficult to implement, due to lag of cooperations, among stakeholders. **Research Method.** By simple random sampling, purposively the total of 120 active-students at work place are selected as repondents. Using Path analysis method to analyze collected data, by WarpPLS program. The model reworked two times. The first with all variables, and the second by trimming method. **Findings.** The competency and motivation, individually has a direct positive effect on end-user satisfaction. Individually, competency and motivation has a indirect positive effect on customer satisfaction mediated by experience, and job performance. In the mean time, all variable after trimming, individually has a positive effect on end-user's satisfaction. Finally, all variables simultaneously have the positive effects to the end-user or customer's satisfaction. **Conclusion and Recommendation.** The model is fit to be applied up to supervisory level. It is recommended to pursue learning objective in campus to match with the sixth level of National Qualification Framework.

Key words: Competency, Motivation, Experience, Performance, End-user's Satisfaction

I. INTRODUCTION

A sandwich program has been long time applied in Germany, as stated by Deissinger[1], and Tremblay[2]. This program has been succesfully done in cooperation with industry. The compliance with pre-requisite and the application of competency standard in both entities are among the key success factors in doing sandwich practices. In Indonesia, this program is easy to say, but difficult to implement, due to lag of cooperation between higher education institutions and users, in every particular industry[3].

STEIN has come to intiate it since 2008. A lot of hindrance were in place. How to detect competency standards, and standard operating procedures at work place are the primary task. The second barrier is to deliver the competency standard in modul from operator level, and supervisor level. Afterward, student can go further to achieve the 5th and the 6th level of NQF, by learning process in accordance with curriculum and learning objective. This is chosen to follow government regulation in preparing A Letter of Declaration to back up Diploma.

The lecturers and facilitators have to be certified at first place by Certification Authority Body[4]. Prior to this stage, all lecturers shall be qualified in master

¹ STIE Pariwisata Internasional (STEIN), Jakarta Indonesia

degree, as the mandatory requirement. The third level of handicap is to allocate time, resources, facilities, and other supporting infrastructures. To cope with these problems, STEIN has tied up a large cooperation with all related-stakeholders. Students have been in dual program from initial stage, especially those who have been trained, assessed, and certified at the operational level. It is an extraordinary step, but need to be in alert to guarantee the result by collecting all feedback from stakeholders, and in this particular research, the user in industry.

Prevention is better than curative, this is a proverb, or motto in health care. In campus this motto or proverb can also be good to apply. The reason that the process is a kind of preparation prior to delivery, a graduation in this particular case. STEIN has a unique process in their curriculum, and strategy of delivery. In curriculum, STEIN has designed and accredited as a management program, majority in hotel, and restaurant management. Prior to career development, strategies have been set up to acquire knowledge, skill, attitude to build competency, and experience at the same time, at work place.

The 21st century gives the multi-aspects of challenges to student[5]. It is mandatory for student to think that this is very critical ones. In acquiring critical thinking, students have to adapt how to acquire the competencies. In gaining them, it is necessary to be able to interpret things on hand or in front of us. It is then continued to make it rationale. Afterward, it is necessary to do judgement on things prior to setting up decision and actions. All these can be gained by designing curriculum, and extra curriculum or the combination of them to present sandwich program. In between, the feedback from users are necessary for continual improvement (ISO 9001) [6], prior to final assessment to gain the sixth level of NQF. This is the main reason of this research.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Competitive Advantage

Competitive advantage in dealing with new comer in an industry, substitution, and supplier bargaining power are necessary to reserve differentiation and efficiency. Porter defined in his book that in diagnosing competitive advantage, it takes definition of supply chain in an industry[7]. STEIN has set up its policy and strategy in designing curriculum, and extra curriculum to gain precision, repetition, accuracy through experiences at work place. Students have to upgrade their competency, discipline, motivation to gain experience. Having these indicators and variables are fulfilled, their job-performance being able to comply with user's job satisfaction. The strategy and process as set up above, can generate a competitive advantage to STEIN. It is also in line with the government regulation in implementing and gaining the sixth level of NQF in bachelor degree, study program[8].

Competency

Competency is the interception of knowledge, skills, attitude, and experience in doing the right things at work place, as proposed by Vargas[9]. Competency is conducted to gain experience by repetitive works to attain precision. One of the employability element, such as team work capability, most likely only possible at work place. The culture at work place takes everyone to follow as stated by Gonczi&Hager[4]. At work place, it takes cultural competence. This is regarding transformation of knowledge about individuals and groups of people in organization into a company operating standard procedures. This operating procedures are based on company policies, and government regulation that appropriate in a company[10]. It is then hypothesized that when students take sandwich program, they can gain experience. On the other hand the user or management of a company would be satisfied upon their performances.

H_{1a} : The student's **Competency** has a positive direct effect on Their experience

H_{1b} : The student's **Competency** has a positive direct effect on Job-performance at work place

H_{1c} : The student's **Competency** has a positive indirect effect on End-user Satisfaction at work place

Discipline

The tight schedule in campus and work place demand a high discipline of student to comply with the two different regulations. STEIN can accommodate student to choose time schedule in flexible schedule, either in the morning or afternoon class meeting. However, office hour in theory is matching, but not in reality, sometime. It is therefore, discipline of student is a mandatory to be open minded, and focused on their goal as set-out, at the first place. In company level Management By Objective (MBO) is known as a tool to measure plan and realization. Luthans re-defines that MBO is an effective method to reach the target[13]. He then explain that MBO shall be included of goal setting, participative decision making process, and feedback against goal it self. This research is the major tool to get the quality feedback from end-user, as they also the one to get direct benefit, at their own entity. It is therefore hyphotesized that student discipline affected their quality experience, job performance, and end-user's satisfaction.

H_{2a} : The student's Diciplinehas a positive direct effect on their experience

H_{2b} : The student's Diciplinehas a positive direct effect ontheir Job-performance at work place

H_{2c} : The student's Diciplinehas a positive indirect effect on End-user Satisfaction at work place

Motivation

Robbins & Judge in his book had simplified the definition of motivation. They have defined that motivation explaining the strength, direction, and tenacity of a person to pursue the goal[11]. Granville says that this is also valid in competency based education[12]. The set of goal, has been located at the initial stage. Self actualization is the drive of strength to reach growth, and self fulfillment[12]. The student of STEIN come from lower-middle level who needs a higher education, but at the same time needs job opportunity too. In this particular case, students are driven by extrinsic motivation, as stated by Keitner&Kinicki[14]. This motivation is valid and good for short term only, for the long run it is the need for the of intrinsic motivation to do what the like in passion. The experience is needed to build student portfolio, for instance, in the long run, These things have been hypothesized as follows:

- H_{3a} : The student's Motivation has a positive direct effect on their experience
- H_{3b} : The student's Motivation has a positive direct effect on their Job-performance at work place
- H_{3c} : The student's Motivation has a positive indirect effect on End-user Satisfaction at work place

Experience

Experience is a good teacher. This proverb is very popular, throughout the country. Learning by doing, is another saying. The experience at work place to gain team work, communication skills, interpersonal skills, hardskills to do the tasks. Combination of these accomplishment is a valuable for the next process in certification application, as stated by Silitonga[15]. Giving the judgement to participate in competency assessment, all portfolio, especially experience is the most preferred, in assessment. Moreover, the repetition of a single competency unit in campus is limited due to time and cost- aspects. According to Tuck[16], the guideline of competency based training and assessment is necessary. The experience is cumulative human capital that gained from day today working activities. The interception of attitude, and skills reflecting job performance that lead to employee and end-user's satisfaction. This is the finding of Esu[17], and Grollman[18]. It is therefore, hypothesized here-in-under that both of them are valuable to contribute job-performance and user's satisfaction.

- H_{4a} : The student's Experience has a positive direct effect on their effect on their Job-performance at work place
- H_{4b} : The student's Motivation has a positive direct effect against End-user Satisfaction at work place

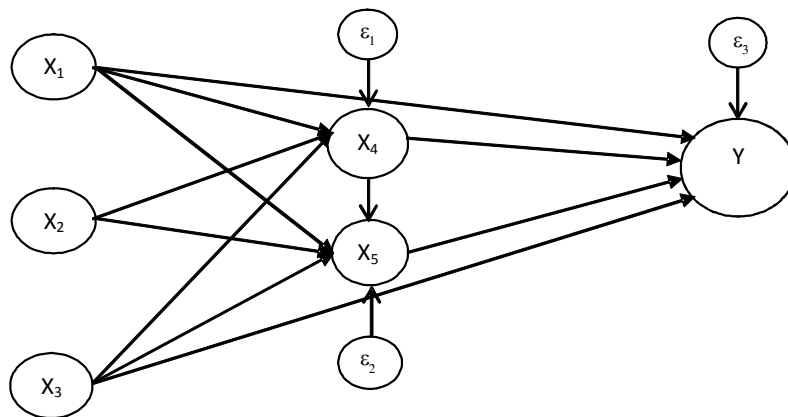
Job-performance

Job performance is the key element to justify that a staff or worker has satisfy the user. The standards is necessary. Benchmarking is one of the standard. In tourism business, especially in hotel operation, the best practice for the certain area of working has been agree with the best practice. This is shown by average performance of a room attendant is two rooms by one hour, or one room within 30 minutes. The dimensions of performance are vary. Certo proposes that at least three dimension, such as contribution and initiative, willingness to stay in company, and perform the given assignments [19].

H_{4b} : The student’s Job-performancehas a positive direct effect against End-user Satisfaction at work place

End-user Satisfaction

The gap between the expectation and delivery is a stick yard by end-user to judge student performance. The customer or end-user’s satisfaction is mandatory in this century. This is very clear as all things no limitation, no border, many choice in all things that people need. The satisfaction has effect to loyalty, potential income, repetitive order,cross selling, and many other multiplier effects in a positive and negative ones. Out of many indicators, in end-user’s satisfaction, the perception,



Remarks : X_1 Competency; X_2 Discipline; X_3 Motivation ;
 X_4 ; Experience; X_5 Job Performance;
 Y End-user’s satisfaction

ϵ_1 : Error in sub – structural I
 ϵ_2 : Error in sub – structural II
 ϵ_3 : Error in sub – structural III

Figure 1: Path Analysis Model

experience post purchase or recruitment in this particular case, and performance. The performance is a comparison between one product to another, at the similar category. The feeling after doing comparison among the similar one as described by Tjiptono [25]. The positive disconfirmation is called when the performance is better than expected. On the contrary one is a negative disconfirmation. Lovelock mentioned that the end-user or customer's satisfaction is based on their experience, and expectation. [27].

III. RESEARCH METHOD

(A) Sampling Technique

All students of STEIN are mandatory to execute sandwich program, except the 1st semester. It is therefore the population in this research are 800 students. They have been working in many hotels and restaurants, in Jakarta, and Bekasi that close to the campus. It could be possible to have more than one student at one entity. All of them are entitled to be the sample of this survey. Aiming to attain contribution for continual improvement, the Population, and respondents were determined as follows. The students that take sandwich program in hotels and restaurants perceived by their supervisors at individual work-places. The supervisor or manager of work-place are requested to give feedback by designed-questionnaire. Out of this population, based on probability sampling, by simple random sampling technique, the respondents are 120 persons, referred to Sugiono[20], and Riduwan & Kuncoro [21]. The judgement in using this technique is due to nature of homogeneity of students at workplace. To measure the student's free judgement, the Likert Scale is applied as shown herein-under. All of the participants of sandwich program have the equal opportunity to participate as questionnaire was widely distributed.

Likert Scale

The score of Likert as shown below:

TABLE I: LIKERT SCALE

<i>Alternative of independent answer</i>	<i>Score</i>
Most Agree	5
Agree	4
Netral	3
Not Agree	2
Most Not Agree	1

(B) Data Analysis Method

The path analysis applied to test hypothesis and analyzing in this research. This method had been initiated and found by Sewal Wright in 1920. This is useful to

know the effect between the exogen variables, and toward the dependent variable, directly and indirectly as suggested Riduwan&Kuncoro[21].

In 2010, the path analysis was tested and developed by Ned Kock by using software program, namely WarpPLS 3.0. This software is capable to identify non-linear relations between latent variables. Solihin&Ratmono have quoted this application and have recommended that the program also able to make auto correction on the value of path coefficient, based on the designed relations[22].

IV. RESULTS AND DISCUSSIONS

Validity test is done by using correlation product moment formula. Prior to conduct the instrument, Validity test is given to 20 user[20].

TABLE II: THE SUMMARY OF VALIDITY TEST

<i>Variable</i>	<i>Total of Statement</i>	<i>Not Valid</i>	<i>Valid</i>
Competency (X ₁)	9	0	9
Discipline (X ₂)	5	0	5
Motivation (X ₃)	10	0	10
Experience (X ₄)	7	0	7
STEIN's Student Performance (X ₅)	8	0	8
User Satisfaction (Y)	7	0	7

Based on the above result, the instrument as valid. It is then followed by reliability test in attaining the consistency of the respondents against the instrument.

TABLE III: THE SUMMARY OF RELIABILITY TEST

<i>Variable</i>	<i>Value of Cronbach Alpha</i>	<i>Summary</i>
Competency (X ₁)	0.932	Reliable
Discipline (X ₂)	0.747	Reliable
Motivation (X ₃)	0.761	Reliable
Experience (X ₄)	0.772	Reliable
STEIN's Student Performance (X ₅)	0.762	Reliable
User Satisfaction (Y)	0.925	Reliable

All values of Alpha Cronbach are above 0.60, it means the instrument is reliable. This is to prove that questionnaire is applicable for the designed purpose. The next step is to transform the ordinal data into interval scale, as stated by Riduwan and Kuncoro[21], in order to comply with parametric analysis. There are four of choice of algorithm in WarpPLS 3.0 program. There are :Warp3 PLS regression; Warp2 PLS regression; PLS regression, and Robust path analysis. The choice in this particular research analysis is the robust path analysis algorithm, as suggested by Solihin and Ratmonof[22]. The average value of all indicators are

attained. Additionally, this program has a resampling method by bootstrapping, or Jackknifing, and Blindfolding. One of this chosen, the bootstrapping one. The Classic Assumption Test is then presented below.

TABLE IV: CLASSIC ASSUMPTION TEST

<i>Test</i>	<i>Result</i>
Normality	Kolmogorov-smirnov Z = 1.169 Asymp. Sig. (2-tailed) = 0.130
Multicollinearity	Model fit indices and p value APC=0.231, P<0.001 ARS=0.546, P<0.001 AVIF=2.226, Good if < 5
Linearity	X ₁ → X ₄ = Warped X ₂ → X ₄ = Warped X ₃ → X ₄ = Warped X ₁ → X ₅ = Warped X ₂ → X ₅ = Warped X ₃ → X ₅ = Warped X ₄ → X ₅ = Warped X ₄ → Y = Warped X ₅ → Y = Warped X ₁ → Y = Warped X ₃ → Y = Warped

The above KolmogrovSmirnov formula attain the value of 0.130. It means that normal distribution as the first compliance has been fulfilled, due to the value of asymp. Sig > $\alpha = 0.05$. While the second pre-requisite is multicollinearity. The P value of Average Path Coefficient (APC) and Average Rsquared (ARS) is p< 0,001. This comply with multicollinearity, as the p value is < $\alpha = 0,05$. It is also proved by the value of Average Variance Inflation Factor (AVIF) at 2.226 < 5. There is no multicollinearity among exogen variables, and at the same time, the goodness of fit of the model is fulfilled.

The third pre-requisite is Linearity. The interpretation of linearity upon the above result as shown in Table IV, that all variables against moderating ones, and against dependent one is warped. Warped means that no linearity among the variables, the whole relationship are in linear. Furthermore, the 4th re-requisite is outlier. The outlier data, when the value is -4 or 4. There is no such value in the whole results, so it is then concluded as no outlier. Since all pre-requisite have been fulfilled, the analysis is done with the following result.

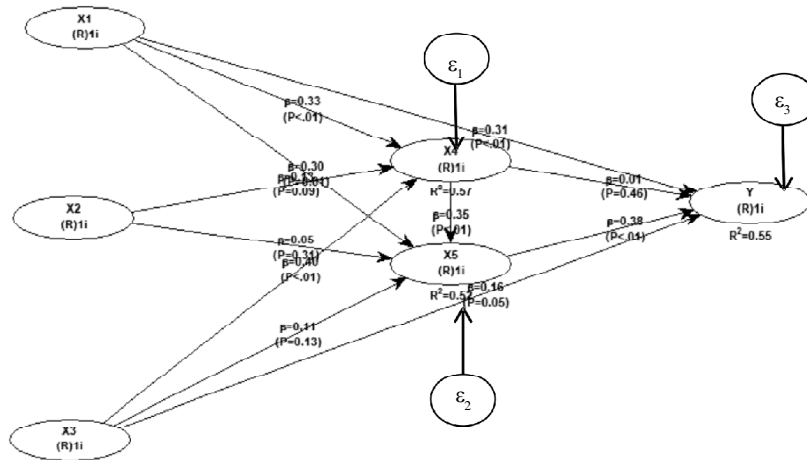


Figure 2: Path Coefficient

- X_1 : Competency
- X_2 : Discipline
- X_3 : Motivation
- X_4 : Experience
- X_5 : STEIN's Student Performance
- Y : User Satisfaction

The above results need to be analyzed and discussed to find the better model. The previous research had found that trimming model is necessary[24]. Based on that experience as a benchmark, the analysis are presented in table below and then discussed.

TABLE V: SUMMARY OF TEST

The effect among variables	The Effect of Path Causal						
	Direct	Indirect segment 1	Indirect segment 2	Total	Category	R^2	Direct
$X_1 ? X_4$	0.327	0.002	-	-	0.327	Strong	0.566
$X_2 ? X_4$	0.132	0.085	-	-	0.132	Moderate	
$X_3 ? X_4$	0.400	<0.001	-	-	0.400	Strong	
$X_1 ? X_5$	0.304	0.012	0.114	-	0.418	Strong	0.518
$X_2 ? X_5$	0.053	0.308	0.046	-	0.099	Lemah	
$X_3 ? X_5$	0.114	0.130	0.139	-	0.253	Moderate	
$X_4 ? X_5$	0.348	0.003	-	-	0.348	Strong	
$X_1 ? Y$	0.301	0.007	0.118	0.043	0.470	Strong	0.554
$X_2 ? Y$	-	-	0.022	0.017	0.039	Weak	
$X_3 ? Y$	0.161	0.047	0.047	0.052	0.261	Moderate	
$X_4 ? Y$	0.10	0.458	0.131	-	0.142	Moderate	
$X_5 ? Y$	0.377	<0.001	-	-	0.377	Strong	

Equation model of sub-structural path analysis are being reformulated as follows:

Sub-structural I : $X_4 = 0.327 X_1 + 0.132 X_2 + 0.400 X_3 + 0.659 \epsilon_1$
 Sub-structural II : $X_5 = 0.304 X_1 + 0.053 X_2 + 0.114 X_3 + 0.348 X_4 + 0.694 \epsilon_2$
 Sub-structural III : $Y = 0.310 + 0.161 + 0.010 + 0.377 + 0.668 \epsilon_3$

The output of analysis, concluded that competency has a direct effect on experience. This is proved by the p value of $0.002 < \alpha$ where degree of confidence at 0.05 with the coefficient value at the amount of 0.327. As quoted previously, Vargas [9], and Silitonga [15] stated that Competency is conducted to gain experience by repetitive works to attain precision. The culture competence most likely attained at work place, it has been confirmed by Gonczi & Hager[4]. In delivering the competency, the discipline is also included to back up, it is then analyzed the effect of discipline toward experience. Unfortunately, the result shows differently, as the p value of $0.085 > \alpha$ where degree of confidence at 0.05, and the coefficient value is 0.132. This result was not supported by theories, however, it can be understood since the competency goal is to get things done according to company operating standard procedure. The possible variable could be the procedure.

Motivation has a direct effect on experience. This is proved by the p value of $<0.001 < \alpha$ where degree of confidence at 0.05 with coefficient value at the amount of 0.400. Both Robbins & Judge, and Granville supported this result. It was stated above that motivation explaining the strength, direction, and tenacity of a person to pursue the goal[11]. This is also the goal of competency based education[12].

Competency, discipline, and motivation have direct effect on experience, simultaneously. This is supported by the result that majority of 56.6%, while the rest of it at the amount of 43.4% were affected by other variable that not included in this research. Users are willing to retain employee, when they are in line with adequate competency to perform the assigned tasks, in proper discipline and high motivation. These are the mandatory power to grow. The portfolio, records of achievement by experience is the key to assessment process[15]. The experience is the way to accomplish competency in team work, communication skills, interpersonal skills, hardskills to do the tasks.

Hence, the student competency has a direct effect on student performance at work place. This conclusion of result is supported by the p value sebesar $0.012 < \alpha$ at 0.05 with coefficient value of 0.304. It is also has an indirect effect on student performance mediated by experience at the amount of 0.114. This is also in line with theory of accuracy and precision. The more frequency done the better performance will be. Vargas has confirmed that competency consist of knowledge, skills, and attitude at work place can lead to a better performance[9]. On the other hand discipline has no direct effect on student performance at work place. This is shown by the p value of $0.308 > \alpha$ at 0.05 with coefficient value of 0.052, and indirect coefficient at the amount of 0.046.

The Motivation as independent variable has also no direct effect on student performance at work place. This is proved by the p value of $0.130 > \alpha$ at 0.05

with the coefficient value of 0.114. However, the motivation has an indirect effect on student performance mediated by experience variable. The value of 0.139 has proved this positive effect. This result is in line with the driven by extrinsic motivation, and probably included intrinsic motivation as stated by Keitner & Kinicki[14]. It will be benefit for student to work based on extrinsic and intrinsic driven. This motivation is valid and good for short term, and long term.

The next analysis has proved that experience has a direct effect on student performance at work place. This result is supported by p value of $0.003 < \alpha$ where degree of confidence at 0.05 with the coefficient value at the amount of 0.348. This variable is also function as mediator of causal relationship. This mediating variable has a causal relation to competency, and performance. It is also has a causal relation to motivation toward performance. The performance has contribution and initiative as one of its dimension. It is also measured by their performance to the given assignments, as stated by Certo[19].

The following analysis shows that there is a positive effect of competency, discipline, and motivation toward job-performance of the student, simultaneously. This conclusion is backed up by the result that its effect is 51.8%. While the rest of 48.2% were effected by other variables that not included yet in this research.

The independent variable of competence has a direct and indirect effect of user's satisfaction. We can also see the result of the p value of $0.007 < \alpha$ where the degree of confidence at 0.05 with the coefficient value at the amount of 0.301. This result is mediated by experience with the value of coefficient 0.118. While the value of 0.043 mediated by performance. The length of work for part of the student is less than one year, it is reasonable that this value is much smaller, compared with competency against end-user's satisfaction.

Discipline has no direct effect against the user-satisfaction, mediated by experience. Since the coefficient value of 0.022, and the value mediated by performance is 0.017. Motivation independent variable has a positive direct effect on end-user's satisfaction. This is proved by the p value of $0.047 < \alpha$ where degree of confidence at 0.05 with the coefficient value of 0.161. It is also has an indirect effect mediated by job-performance. The coefficient value is 0.052. But there is no effect of indirect that mediated by experience toward the end-user satisfaction. However, there is the positive effect of motivation toward end-user satisfaction mediated by experience, and performance, simultaneously. This is easy to explain that and user trust in performance through experience. Spencer and Spencer define that ability to perform competency shall be added with experience[23]. Competency standards are the material to develop curriculum, while delivery of curriculum shall be in theory and practice. In Vocational

institutions, experience at work place is a demand and mandatory, this is the succesfull story in Germany, as explained by Schneider[25].

The student performance has been positively effected the end-user’s satisfaction as the p value is<0.001 at the degree of confidence 0.005 with coefficient at the amount of 0.377. This is the core of this research to prove the coorelation of the curriculum, and delivery in campus against the real case at work place. This positive result is then continued to be proved whether the experience, and student performance contributed to user’s satisfaction. This is again the the user need both experience and performance. One variable is not enough[23].

The whole variables, such as competency, motivation, experience, and performance have positively effected the end-user’s satisfaction. The result shows the portion of 55.4% to end-user satisfaction. It means that there are 44.6% are still effected by other varibales that not inbcluede in this research. Only one variable that no effect t all to the dependen variable, it is discipline. Since this variable was not in favour to the research objective, it is then trimming model being applied. Trimming model is aimed to improve the path analysis model, as shown below.

At glance the model has created the relations of the direct ones, and the indirect ones. It is interesting to see that Competency and Motivation takes longway to dependent variable when it comes to indirect relations. The presented table below is the vivid self explanatory findings.

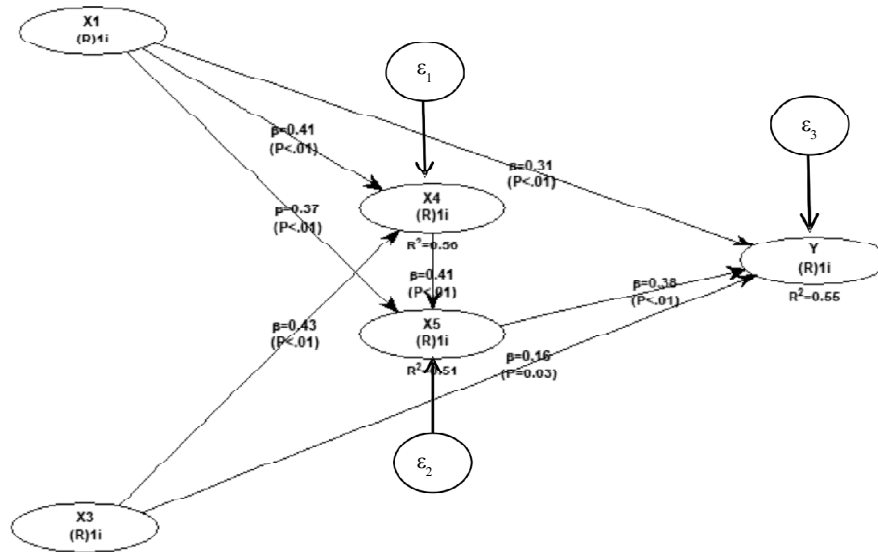


Figure 3: Path Coefficient after Trimming

TABLE VI: THE TEST RESULT AFTER TRIMMING

<i>The Effect Among Variables</i>	<i>The Effect of Path Causal</i>					<i>R²</i>
	<i>Direct</i>	<i>Indirect segment 1</i>	<i>Indirect segment 2</i>	<i>Total</i>	<i>Category</i>	
$X_1 \rightarrow X_4$	0.406	-	-	0.406	Strong	0.558
$X_3 \rightarrow X_4$	0.428	-	-	0.428	Strong	
$X_1 \rightarrow X_5$	0.368	0.168	-	0.536	Strong	0.510
$X_3 \rightarrow X_5$	-	0.178	-	0.178	Moderate	
$X_4 \rightarrow X_5$	0.415	-	-	0.415	Strong	0.554
$X_1 \rightarrow Y$	0.312	0.140	0.064	0.516	Strong	
$X_3 \rightarrow Y$	0.165	-	0.067	0.232	Moderate	
$X_4 \rightarrow Y$	-	0.158	-	0.158	Moderate	
$X_5 \rightarrow Y$	0.380	-	-	0.380	Strong	

Having done a trimming against models, the new equation model of sub-structural path analysis are being reformulated as follows:

$$\begin{aligned} \text{Sub-structural I : } X_4 &= 0.406 X_1 + 0.428 X_3 + 0.665 \varepsilon_1 \\ \text{Sub-structural I : } X_5 &= 0.368 X_1 + 0.415 X_4 + 0.7 \varepsilon_2 \\ \text{Sub-structural II : } Y &= 0.312 + 0.165 + 0.380 + 0.668 \varepsilon_3 \end{aligned}$$

The result of trimming model found that Competency has a direct effect against experience. The amount of effect is 0.406 or equal with 40.6%. This effect is categorized as strong and real. This is supported by Vargas[9], Dessinger[1], Silitonga[15], and Schneider[24].

The variable of Motivation has a. The amount of effect is 0.428 or 42.8%. direct positive effect on experience This value is categorized as strong and real. The extrinsic and intrinsic motivation, have embedded inside, as mentioned by Keitner&Kinicki[14]. This is also shows the stronger effect compared with competency. It means motivation is a driver of competency to find experience in a way to deliver performance. All these can lead to user’s satisfaction.

Additionally, the competency variable has a direct and indirect effects on student performance mediated by experience. The value of direct effect is 0.368 (36.8%), and the indirect one is 0.168 (16.8%), totally 0.536 (52.6%). This is categorized as strong and real. The limited practices at campus need to be backed up by experience at work place, that prove the essence of this research. While other variables are need to be observed internally, as well as by further research. Why sandwich program is regarded as the best vocational method in acquiring skills, knowledge, and attitude is answered.

The motivation variable too, has indirect effect mediated by experience on student performance at work place. The result of coefficient is 0.178 (17.8%) and

this categorized as moderate and real. Since the direct effect is 0.428 or 42.8% on performance, it is understood that the domain of motivation can be more on intrinsic and extrinsic one[14]. To support precision and accuracy, it also found that experience has direct effect on performance. The coefficient of 0.415 or 41.5% is categorized as strong and real.

The student experience has indirect effect on end-user satisfaction mediated by student performance. The value of coefficient is 0.158 or 15.8%. This is categorized as moderate and real. Since the model is trimmed, the further interesting result is the performance against the end-user satisfaction. This is proved as the result amount is 0.380 or 38% the performance has direct effect on end-user satisfaction. This main purpose of the research is answered, however, the other undetected variable is also significant and in need to be observed internally.

The final result is competency against end-user satisfaction mediated by student performance. The overall value of direct and indirect is 0.516. This is categorized as strong and real. The path of competency to experience, the value is 0.312 or 31.2%. While the value of indirect effect from experience to performance is 0.140 or 14%. Both direct and indirect has a positive effect, and the total is significant in strong category. This is the model of NQF implementation that has been proposed in the previous research by Silitonga[15]. This model has been in line with the measurement of customer satisfaction as mentioned by Lovelock [27].

V. CONCLUSION AND RECOMMENDATION

Conclusion

Competency of students in sandwich program is a pre-requisite to gain experience. The experience accelerates their performance at work place. The model is able to satisfy end-user as the good feedback to STEIN, or any vocational school for the short run. The competency, motivation, mediated by experience and performance of the student have positively effected the user's satisfaction. However, the extrinsic motivation has taken a main role and a bigger portion to drive student's performance at work place. In positive wise, both experience and performance have led to satisfy the end-users, as the main purpose of this study.

Recommendation

Although the feedback is valuable, there is another consideration for STEIN. Since STEIN is a degree program, the portion of vocational shall be limited to supervisory level, only. The next step to managerial level is mandatory. The ability to perform managerial level is a representation of the 6th level in National Qualification Framework, at the same time to follow national rules and law in higher education. However, there are many other variables that could be included

in the next research to increase the portion of experience, performance, and end-user's satisfaction.

References

- Deissinger T. (2007). *Making Schools Practical*, Education and Training, Emerald Group Publishing Ltd.
- Tremblay D G, Le Bot I, (2003). *The German Dual Apprenticeship System, Analysis of Its Evolution and Present Challenges*, Tele-Universite, Univesite du Quebec.
- Nuh M. (2010). *Pedoman Indonesian Qualification Framework*, Direktorat Jenderal Pendidikan Tinggi.
- Gonczi A, Hager P. (2010). *The Competency Model*, Elsevier Ltd, Sydney.
- Ontario Public Servie. (2016). *21st Centuries Competencies*, Winter Edition.
- International Organization for Standarization. (2015). *Quality Management System*, ISO, Geneva.
- Porter, M. (2008). *Competitive Advantage*, Translated by: Saputra, L, Karisma Publishing Group, Jakarta.
- Undang-Undang Nomor 12. Tahun 2012 *Tentang Pendidikan Tinggi*, Jakarta.
- Vargas. (2002). *40 Questions on Certification and Standard*. Geneva, ILO.
- Peraturan Menteri Ristek-Dikti No. 49 Tahun 2014 *Tentang Penerapan Kerangka Kualifikasi Nasional Indonesia*, di Pendidikan Tinggi.
- Robbins, S.P., Judge, T.A. (2015). *Organizational Behaviour*, Translated By Saraswati, R, Sirait, F, Penerbit Salemba Empat, Jakarta.
- Granville A. (2007). *Outcomes-Based Education*, Educational Research, 17(2).
- Luthans, F. (2005). *Organizational Behaviour*, 10th Edition, Translated by Yuwono et.al. Penerbit ANDI Yogyakarta.
- Keitner, R & Kinicki, A. (2014). *Organizational Behavior*, 9th Edition, Translated By Halim, A, Publisher : Penerbit Salemba Empat, Jakarta.
- Silitonga, P. (2015). *Revolusi Implementasi National Qualification Framework*, Penerbit Andi, Yogyakarta.
- Tuck R. (2007). *An Introductory Guide to National Qualifications Frameworks: Conceptual and Practical Issues for Policy Makers, Skills and Employability*, Department of Internatinal Labour Office, Geneva.
- Esu B B. (2012). *Linking Human Capital Management with Tourism Development and Management for Economic Survival*, International of Journal and Social Science, Vol 3, No. 11, Nigeria.
- Grollman P. (2007). *Competency Based Training*, Journal of European Industril Taining Volume 31 Number 7. 2007.
- Certo, S. C. (1984). *Management of of Organizations and Human Resources*, Brown Publishers, Dubuque, Iowa.
- Sugiyono. (2015). *Metode Penelitian Manajemen*. Alfabeta : Bandung.
- Riduwan, dan Kuncoro, Engkos Achmad. (2008). *Cara Menggunakandan Memaknai Analisis Jalur (Path Analysis)*. Alfabeta : Bandung.

- Sholihin, Mahfud, dan Ratmono, Dwi. (2013). Analisis SEM-PLS dengan WarpPLS 3.0 Untuk Hubungan Nonlinear Dalam Penelitian Sosial dan Bisnis. ANDI OFFSET : Yogyakarta.
- Spencer LM, Spencer SM. (1993). *Competence at Work: Models for Superior Performance*, John Wiley & Sons, Inc. New York.
- Silitonga, P. (2017). *The Effect of Learning Facilities. Curriculum Design and Certification on Student Satisfaction Through Mediating Role of Service Quality*, International Journal of Economic and Research, ISSN-0972-938.
- Schneider U H. Krause M. Who C. (2007). *Vocational Education and Training in Germany*, Cedefop Panorama Series No. 138, Luxemburg.
- Tjiptono, F. (2012). *Service Management Mewujudkan Layanan Prima*, Andi Offset, Yogyakarta.
- Lovelock, C, Wirtz, J, Mussry, J. (2011). *Service Marketing*, 7th Edition, Translated by Wulandari, D, Putera, D. B, Penerbit Erlangga, Jakarta.