Using Linear Regression Model to Analyze the Role of Internship Program in Supporting Work Readiness

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Abstract

This study aims to address the student prepare their job knowledge, interaction with others, and personal grooming to support their abilities and skill to face the workforce in the era of industrial revolution 4.0. The result shows that only three variables are significant: job knowledge, interaction with others, and personal grooming towards abilities and skills influenced by R^2 57.8%. In line with this, unique grooming pop out as one of being considered in hone students abilities and skills.

Keywords: Job knowledge, Quantity of work, Quality of work, Motivation, Interaction with others, Personal grooming, Attendance.

Introduction

During the last decades, vocational education in Indonesia is rapidly growing. Currently, Ministry of Education and Culture Republic of Indonesia mention that 16% of its universities are vocational education of all educational institution in the country. The number of universities offers the vocational program either to participate and provides good education and to face the era of globalization, industrial revolution 4.0 [1]. In line with this, we need human resources. Academic training is a part of the university curriculum and improves student's academic ability to pursue higher education [2]. Meanwhile, professional education means introducing training programs that train students according to their area of experience to improve their future skills [3].

The vocational program or professional training is still diverse in changing the curriculum, in line with labor market growth and advances in science and technology. Given that socioeconomic life depends much more on rapid technological developments in the future, the vocational training orientation is aimed at training in jobs or [4], [5] according to the Indonesian President's Direction for the Acceleration of Development of Excellent Human Resources 2020-2024. The Cooperative model is the basis of dual education principles because the apprentices could learn and hone the knowledge and skill they implement in a firm directly as part of their vocational education [6],[7]. At the same time, also build hardworking human resources who are dynamic, productive, skilled, mastering science and technology and supported by industry cooperation and global talent and Penta Helix hub [8][9]. Hence, vocational education is pop out to help youth to enters firms smoothly [10].

Higher Education Institutions (HEIs) established a program to prepare graduates to become employees who have employable skills to face the competition in the labor market. An internship program is one commonly used to enhancing employability that could be implied [11]. Work Practical Industry Journal of Lombok Tourism Polytechnic 1.0 (2020) elaborates seven criteria and justifications to assess student performance during the internship. Seven criteria are job knowledge, the quantity of work, quality of work, motivation, interaction with others, personal grooming, attendance. In addition, students claimed that their internships helped prepare them for employment after college [12], [13] and that it helped them to choose their career future [12], [14].

In the transition to the workforce, work readiness is a concept that emerged in the literature to predict and judge a graduate's potential [15]. Soft skills are of the highest importance, and academic reputation got the lowest importance value when hiring a new graduate [16], [17]. Individual behavior and performance stated that abilities and skills play the primary role [18]. Ability and skills are the one classification that affects work behaviors such as employee productivity, creativity, and performance [19]. Accordingly, through abilities and skills, it can be seen how graduates show their performance and then could state that they already have the best work readiness as a workforce. This paper uses multiple regression analysis with ordinary least squares to find which variable is significant to supporting work readiness.
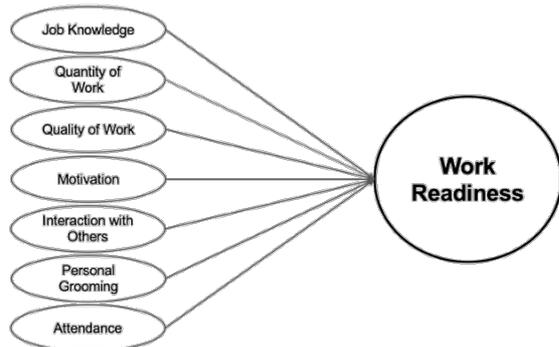
Fig. 1 Research Theoretical Framework

Research Method and Procedure

A. Respondent Subject

TABLE I
DEMOGRAPHIC

Categories	Number	Percentage
Gender		
Male	167	60,30%
Female	110	39,70%
Study Program		
Room Division	183	66,10%
F&B Product	40	14,40%
F&B Service	54	19,50%
Hotel Classification		
Under Three Star	48	17,30%
Four Star	89	32,10%
Five Star	140	50,50%
Status		
Student	192	69,30%
Graduated Students	85	30,70%

The total numbers of respondents are 277 hospitality students who have completed an internship program in the hotel industry. Regarding the gender categories, 60.30% male and 39.70% female, respectively. Besides, there are three study programs of hospitality that become the target from this research: room division, F&B Product, and F&B Service. Most of the respondents are from Room Division, who has 66.10% who already fill the questionnaire surveyed through a google form. In addition, for the hotel classification chosen by an apprentice to do internship program, it showed that five-star hotel got the most significant percentage, which has 50.50%. In addition, the status of students who already fill the questionnaire is still active students on Lombok Tourism Polytechnic.

B. Research Tool, Reliability, and Validity

This research uses the Likert scale to measure the respondents of responses. We set 1 to 5 points as strongly disagree to agree strongly. Besides split the questionnaire, we did data collecting through the documentation method. In line with this, we have seven independent variables: job knowledge, the quantity of work, quality of work, motivation, interaction with others, personal grooming, and attendance. Yet, the dependent variable consists of abilities and skills.

Second, to justify the validity of this questionnaire, it is explained that one statement related to personal grooming was deleted because based on Pearson Correlation shows the result lower then 0.3 [20]. Hence, the statement is not significant. Furthermore, all variables explained variance as 61%, and the Cronbach's Alpha coefficient of all variables is 0.82.

TABLE II
VALIDITY TEST PER ITEM

Variable	No	Statement	Pearson Correlation	Note
Job Knowledge	1.	I understand the theory of work I do.	.715	*Valid*
	2.	I am good at practicing the work I do.	.778	*Valid*
	3.	I always look for the core of the problem to solve the problem in detail.	.751	*Valid*
	4.	I always make a work plan before work.	.718	*Valid*
	5.	I feel confident with my English when communicating with guests.	.785	*Valid*
Variable	No	Statement	Pearson Correlation	Note
Quantity of Work	1.	The quantity of work I do is appropriate with the given target	.772	*Valid*
	2.	The quantity of work I do is appropriate with my boss wishes or expectation.	.755	*Valid*
	3.	I could provide services to guests faster.	.808	*Valid*
	4.	I tend to finish much work rather than occur cumulation of work	.798	*Valid*
	5.	Most of the time, I was in the hospitality industry for work.	.690	*Valid*
Variable	No	Statement	Pearson Correlation	Note
Quality of Work	1.	The quality of work I do is appropriate with the work methods that determined by hotel industry.	.784	*Valid*
	2.	The quality of service that I do is appropriate with the guest wishes.	.801	*Valid*
	3.	I do my job on time.	.743	*Valid*
	4.	I put more emphasize on the quality of work.	.803	*Valid*
	5.	I do a job with fully consideration.	.716	*Valid*

Variable	No	Statement	Pearson Correlation	Note
Motivation	1.	I strive to achieve my best performance in the hotel industry.	.800	*Valid*
	2.	I feel good about the work I do.	.767	*Valid*
	3.	With the compliment from the boss, I motivated to work more diligent.	.796	*Valid*
	4.	For me, success in internship place is the most important.	.803	*Valid*
	5.	At work, I always reach my target.	.738	*Valid*

Variable	No	Statement	Pearson Correlation	Note
Interaction with Others	1.	I try to imitate the positive behaviour that showed by co-workers.	.654	*Valid*
	2.	I am actively discussing when there are socialization activities in the hotel industry.	.759	*Valid*
	3.	I could communicate clearly and effectively.	.775	*Valid*
	4.	I can work together with co-workers to achieve common goals.	.769	*Valid*
	5.	I am able to accept disagreements with co-workers.	.785	*Valid*

Variable	No	Statement	Pearson Correlation	Note
Personal Grooming	1.	I always dress neatly.	.525	*Valid*
	2.	I wear the uniform suitable to the appointed day.	.436	*Valid*
	3.	Compared to my friends, my physical appearance is much more attractive.	.801	*Valid*
	4.	I have a suitable physical support with standard in internship place.	.792	*Valid*

Variable	No	Statement	Pearson Correlation	Note
Attendance	1.	I always attend on time to work.	.861	*Valid*
	2.	I always arrive earlier than work hours.	.845	*Valid*
	3.	I never truant on work.	.825	*Valid*
	4.	I always utilize the time I have.	.787	*Valid*
	5.	I can divide the break time at work.	.806	*Valid*

Variable	No	Statement	Pearson Correlation	Note
Abilities and Skills	1.	I feel relaxed and feel no pressure at all to speak in official forums.	.818	*Valid*
	2.	I can easily invite other people to participate in the activities that I will do.	.880	*Valid*
	3.	I feel I have the ability to negotiate with other people.	.865	*Valid*
	4.	I have the ability to select and sort out the work that must be completed first.	.790	*Valid*
	5.	I have an ability to estimating time at work.	.788	*Valid*

Lastly, the instrument's reliability is tested using Cronbach's Alpha coefficient to test the accuracy of the questionnaire. If the coefficient value of Cronbach's Alpha in the range between 0.93-0.94, then the statement items are reliable [21] as showed in Table III.

TABLE III
RELIABILITY STATISTICS

Cronbach's Alpha	N of Items
.936	8

C. Data analysis and statistical processing

Data processing and statistical methods use the computer package software of SPSS 26.0 for windows as the primary data analysis. This research utilizes program SPSS as a tool for data analysis, such as validity, reliability, and hypothesis testing. However, this study uses the multiple regression analysis considering that all the traditional assumptions should be fulfilled, including the normality test, homoscedasticity, autocorrelation, significance of parameter (t-test), and goodness of fit (F-test).

A method used to express the relationship between a dependent variable or response (y) with several independent variables or predictors (x) is a regression method [22]–[24]. The multiple linear regression model use k predictor variables, and the number of observations as many as n can be written in Eq (1).

$$y_i = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \cdots + \beta_k x_{ik} + \varepsilon_i$$
$$y_i = \beta_0 + \sum_{j=1}^{k} \beta_j x_{ij} + \varepsilon_i$$

(1)

The error is assumed to be identical, independent, and normally distributed with zero mean and constant variance [22]. Meanwhile, the testing suitability of the model is simultaneously carried out with the analysis of variance with the following hypotheses:

$$H_0 : \beta_1 = \beta_2 = ... = \beta_k = 0$$
(there is no influence $X_1, X_2 ,... X_j$ affects Y)
$$H_1 : \beta_j \neq 0 , j = 1,2,...,k$$
(there is at least one variable X that affects Y)

The significant level was set at $\alpha = .05$.

Result & Discussion

Multiple regression analysis

To address this issue, we used multiple regression analysis as considering the dependent and independent variable. We measure the normality test to investigate the normally distributed residuals with p-value 0.001 and KS-Value = 0.072. The multicollinearity has not occurred because the VIF < 10 or the range of VIF is less than 4-du. There are seven variables measured in

this research, but only three variables are significant that shows the p-value of the t-test less than which following Job Knowledge, Interaction with others, and Personal grooming. The R^2 describes that each significant independent variable can be explained by 57.4% of the abilities and skills, and 42.6% is influenced by other variables not used in this study.

TABLE IV
MULTIPLE REGRESSION ANALYSIS OF VARIABLES

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	-.536	.247		-2.175	.031		
JKM	.211	.075	.183	2.837*	.005	.371	2.697
QTM	.056	.093	.048	.601	.548	.246	4.062
QLM	.109	.094	.089	1.167	.244	.266	3.761
MTM	-.058	.086	-.049	-.677	.499	.296	3.381
IOM	.353	.100	.267	3.542*	.000	.272	3.678
PGM	.341	.059	.295	5.726*	.000	.583	1.714
ATM	.084	.073	.071	1.156	.249	.407	2.459

JKM: Job Knowledge; QTM: Quantity of Work; QLM: Quality of Work; MTM: Motivation; IOM: Interaction with Others; PGM: Personal Grooming; ATM: Attendance. Significance level each variable *p-value < 0.05.
F= 54.069*, R^2= .574

Three significant variables can consider constructing the final model. Before building the last model, a traditional and primary assumption of the regression model need to be considered. Firstly, the residual should be met the normal distribution, and the residual should be independent. Second, the VIF value should be less than 10, and the variance value should be constant [23]. After removing the not significant variables. We get the final model and the parameters of this model given in Table 1. Yet, all the basics and classical assumptions of regression analysis are met and fulfilled. Meanwhile, we can use this information to construct the relationship with abilities and skills towards Job Knowledge, Interaction with others, and Personal grooming, represented in Eq (2).

$$y = -0.452 + 0.275x_1 + 0.438x_5 + 0.367x_6$$
(2)

The relationship of abilities and skills towards the significant variables can be influenced by R2 57.8% and 42.2% influenced by other variables that are not used in this study. The constant value in Eq (2) is -0.452, indicating that if the variable X is stable, the satisfaction level of variable Y will decrease by -0.452.

Conclusion and Recommendation

In supporting human resources number in Indonesia, students could choose some universities that offer internship programs as their preparation to dive into the real workforce. Furthermore, through an internship program, the firm and school could assess the students to observe their work readiness. There are seven criteria of an internship program that arranged, and abilities and skills are used to indicate work readiness.

The main result of this study is that three of seven criteria of the internship program are a significant effect on abilities and skills: job knowledge, interaction with others, and personal grooming.

Most students think that what they find during internship programs is new knowledge they did not get in university. Then, they interact directly with the masters as vocational people to get more abilities and skills appropriate to their field. Furthermore, personal grooming evidently becomes their consideration while doing an internship program. In conclusion, this study believes that students prepare their abilities and skills with train their job knowledge, interaction with others, and personal grooming.

The limited time and manpower made this research only focusing on hospitality students at Lombok Tourism Polytechnic. The result in this study might not be appropriate or applicable to other universities because of the different criteria of each university. This research needs to develop for future research with considering more scope to present accurately. Furthermore, the result would help the academic education central unit observe the main concern of students during the internship program.

Considering this issue is essential for vocational education institutions, it will be more consistent if the researcher provides an internship program assessment scale and work readiness benchmark. Hence, other variables that are not used in this research can be added to know students' concerns during the internship program.

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