Relationship of Innovation Characteristics with Teacher Adoption Levels on KKNI-Based Curriculum

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Abstract

This study uses a quantitative approach. Quantitative approaches are used to examine changes in social typologies of certain groups. In behavioral and social research, the relationship between two or more variables from two variables can be done with the type of expose facto research. This study will discuss the relationship between the diffusion of innovation and the level of adoption of vocational teachers from the KKNI curriculum. The population of this study was 1314 East Lombok Vocational School teachers consisting of 205 PNS teachers and 1109 honorary teachers. The sample of this study was 135 people who were obtained by using simple random sampling technique. Data collection techniques used in this study are questionnaire, and observations. The data analysis technique used in this study is a regression analysis. The result of this study are there is a relationship between the characteristics of innovation with the level of innovation adoption of teachers to KKNI-based SMK curriculum in East Lombok Regency with a percentage of influence of 54.9%. This shows that the differences in the characteristics of innovation make teachers more enthusiastic about adopting innovation.

Keywords: *Innovation Characteristics; Teacher Adoption Levels; KKNI-Based Curriculum*

Introduction

Diffusion is a process of communication of innovation between citizens (members of the social system) by using certain channels and within a certain time. Communication in this definition is emphasized in the sense of exchanging information (reciprocal relations), between several individuals both centrally (convergent) and scattered (divergent) which takes place spontaneously. With this communication there will be a common opinion among citizens about innovation So diffusion can be one type of communication that is communication that has a main characteristic, the message being communicated is new (innovation).

The characteristic of innovation is the nature of the diffusion of innovation, where the characteristic of innovation is one that determines the speed of an innovation process. According to Rogers (2005),

there are 5 characteristics of innovation, namely: relative advantage, compatibility or compatibility, complexity or complexity, trialability or triability (testability) and observability (observability). According to Rogers (2013), Meulen et al. (2016), and Senyolo et al. (2017) the characteristics of innovation influence the adoption and sustainability of an innovation. These various characteristics of innovation can drive the speed of adoption of innovation, but can also inhibit the adoption of innovation (Warnaen et al. 2013).

There is a close relationship between diffusion, innovation and communication. Because diffusion is a communication process to disseminate ideas, ideas, works, and so on as a product of Innovation, the communication aspect becomes very important in disseminating ideas, ideas, or products. For example, innovation about the curriculum based on KKNI (Indonesian National Qualification Framework) for Vocational Schools (Vocational High Schools). To disseminate that idea, it is necessary to diffuse Innovation about KKNI-based Vocational Curriculum. Usually there are pilot projects that are carried out, socialized, fostered, and then disseminated to other schools. This is what is called the diffusion of innovation, namely the dissemination of an innovation and then adopted by certain groups of people.

The presence of innovation can affect the development of the human mind (Ahmad, 2016). The development of an essential human mindset is determined by internal factors, namely innovation and discovery. The combination of innovation and discovery will be an invention, namely the development of a mindset or culture that is better if the community has implemented it in everyday life. Darsono (2009) states that the nature of the human mind is determined by new things, including by the innovations that are present around it.

The Indonesian National Qualification Framework, hereinafter abbreviated as KKNI, is expected to be able to juxtapose, equalize, and integrate education and work training as well as work experience in the context of providing work competence recognition in accordance with the work structure in various sectors. The Indonesian National Qualification Framework is a competency qualification framework that can juxtapose, equalize and integrate education and work training as well as work experience in the context of providing work competence recognition in accordance with the work structure in various sectors.

The results of observations and interviews with Sakra I Vocational School teachers that there are still many teachers who are not familiar with the KKNI-based curriculum, of 47 PNS teachers and 37 non PNS teachers, there are only 15 teachers (17.85%) who understand about KKNI-based curriculum for Vocational Schools, the others do not understand even have never heard of information about the KKNI-based curriculum. To increase the knowledge of vocational teachers about the KKNI-based curriculum, the presence of these innovations is the basis for developing the minds of these teachers.

Before the SMK teacher reaches the final decision to apply the contents of the KKNI-based SMK curriculum in the learning process, it will be faced by the characteristic factors of innovation. Rogers (1983) mentions, one that influences an individual's decision to adopt innovation is the characteristic of innovation. These factors will encourage individuals to adopt innovation or reject innovation. Therefore, researchers will analyze the relationship between the characteristics of innovation with the level of teacher adoption of the KKNI-based SMK curriculum in East Lombok Regency. The purpose of this study is to: 1) find out the level of adoption of teacher innovation towards the KKNI-based curriculum at SMK East Lombok Regency; 2) analyze the relationship between the characteristics of innovation with the level of teacher adoption of the IQF-based curriculum in East Lombok District Vocational Schools.

Methodology

This research uses a quantitative approach. Quantitative approaches are used to examine changes in social typology of a particular group. In behavioral and social research, the relationship between two or more variables of two variables can be done with the type of expose facto research. According to Sugiyono (2017), ex post facto research is a study conducted to examine events that have occurred which then draw back to find out the factors that can cause these events. This ex post facto research aims to trace back, if possible, what are the factors that cause something to happen. This study will discuss the relationship between the diffusion of innovation with the level of vocational teacher adoption of the IQF curriculum.

The population of this study was 1314 East Lombok Vocational School teachers consisting of 205 PNS teachers and 1109 honorary teachers. The sample of this study was 135 people who were obtained by using simple random sampling technique. According to Arikunto (2006) the sample is a portion of the population (a portion or representative of the population under study). The research sample is a portion of the population taken as a source of data and can represent the entire population. Sugiyono (2017) explains that the sample is a portion of the number and characteristics possessed by the population.

Data collection techniques are the most important step in the research process, because the main purpose of research is to get data (Iskandar, 2008). Data collection techniques used in this study are: 1) Questionnaire, which is a data collection technique that is carried out by giving a set of questions or written statements to the respondent to be answered. Questionnaires are efficient data collection techniques if researchers know the variables to be measured and know what can be expected from respondents (Iskandar, 2008). 2) Observations used are non-participant observations, researchers are not involved and only as independent observers.

The data analysis technique used in this study is a regression analysis with a regression equation: $Y = a + b1X1 + \varepsilon$. Sugiyono (2017) writes, multiple regression analysis is used by researchers if the number of independent variables is at least 2 (two).

Result and Discussion

The characteristics of the innovation of SMKN teachers in East Lombok Regency were measured using a questionnaire consisting of 14 statement items, each of which included four (4) choices with a score of 1 to 4, so that theoretical scores ranged from 14-56. The data were then processed in the form of percentages for each criterion as in Table 1.

Table 1. Data on Innovation Characteristics of Vocational School Teachers in East Lombok District.

No	Statement	Not Aggre	Less Aggre	Aggre	Very Aggre
1	KKNI-based SMK curriculum influences the value of income	0%	10%	69%	21%
2	KKNI-based SMK curriculum influences prestige before the leadership	0%	20%	55%	25%
3	KKNI-based SMK curriculum influences prestige in front of teacher peers	0%	3%	39%	59%
4	KKNI-based SMK curriculum influences prestige in front of students	0%	1%	59%	40%
5	KKNI-based SMK curriculum influences the comfort of learning planning	4%	12%	67%	17%
6	KKNI-based SMK curriculum influences comfort in	1%	13%	62%	24%

No	Statement	Not Aggre	Less Aggre	Aggre	Very Aggre
	conducting learning assessment				
7	KKNI-based SMK curriculum influences the comfort of mentoring students	0%	10%	49%	41%
8	KKNI-based SMK curriculum influences job satisfaction	0%	3%	53%	44%
9	KKNI-based SMK curriculum is consistent with applicable values	3%	5%	62%	30%
10	KKNI-based SMK curriculum is in accordance with past experience	4%	11%	64%	20%
11	There are complexities in the level of adoption of the KKNI-based SMK curriculum	1%	8%	72%	19%
12	There are difficulties in the level of adoption of the KKN-based SMK curriculum	0%	9%	71%	20%
13	KKNI-based SMK curriculum can be tested technically	0%	4%	56%	39%
14	KKNI-based SMK curriculum can be tested economically	0%	8%	59%	33%
	Average	1%	8%	60%	31%

Based on Table 1, teachers agreed more with an average percentage of 60% with the statements given regarding the characteristics of innovation. The meaning is that the curriculum of the KKNI-based Vocational School can simplify the learning process and greatly influences the improvement of the existing learning process.

Determining the categories of SMK innovation characteristics in East Lombok Regency is used the ideal mean and ideal standard deviation, so the results of categorizing the characteristics of SMK innovation in East Lombok Regency can be shown as in Table 2 below.

Table 2: Category of State High School Learning Facilities in the City of Mataram

No	Interval	Frequency	Persentage	Category
1	X ≥ 85	34	25%	High
2	76 ≤ X < 85	64	47%	Medium
3	X < 76	37	27%	Law
Count		135	100%	

Based on the table above, it can be concluded that the data characteristic of vocational teacher innovation in East Lombok Regency, 25% are in the high category, 47% are in the medium category, and 27% are in the low category.

The level of innovation adoption of SMKN teachers in East Lombok Regency was measured using a questionnaire consisting of 9 statement items, each of which included four (4) choices with a score of 1 to 4, so that the theoretical score ranged from 14-56. The data were then processed in the form of percentages for each criterion as in Table 3.

Table 3. Data on the Adoption Rate of Vocational School Teacher Innovations in East Lombok District

No	Statement	Not Aggre	Less Aggre	Aggre	Very Aggre
1	Kurikukum SMK berbasis KKNI adalah penerapan kurikulum SMK berdasarkan standar kompetensi keahlian	0%	12%	61%	27%
2	Penerapan kurikulum SMK berbasis KKNI memberikan keuntungan bagi guru dan siswa	0%	9%	64%	27%
3	Penerapan kurikulum SMK berbasis KKNI ada kesesuaian dengan nlai-nilai yang ada di masyarakat setempat	0%	16%	66%	19%
4	Penarapan kurikulum SMK berbasis KKNI ada kesesuaian dengan tradisi yang ada di masyarakat setempat	0%	21%	65%	14%
5	Penerapan kurikukum SMK berbasis KKNI ada kesesuaian dengan kebutuhan masyarakat setempat	0%	15%	64%	21%
6	Terdapat kesulitan dalam penerapan kurikulum SMK berbasis KKNI dalam proses pembelajaran	0%	16%	62%	21%
7	Ada kemudahan dalam penggunaan kurikulum berbasis KKNI di SMK	0%	12%	67%	21%
8	Apakah bapak /ibu setuju untuk menerapkan penggunaan kurikulum berbasis KKNI di SMK?	0%	11%	70%	19%
9	Ada manfaat positif dalam penerapan kurikulum berbasis KKNI di sekolah bapak / ibu?	0%	10%	60%	30%
	Rata-Rata	0%	14%	64%	22%

Based on Table 3, teachers agree more with the statements given regarding the level of adoption of teacher innovation. The meaning is that the KKNI-based SMK curriculum can be very easily done in its application in the learning process and the KKNI-based curriculum is very beneficial for teachers. Determining the category of the level of vocational innovation adoption in East Lombok Regency used the ideal mean and ideal standard deviation, so the results of categorizing the level of adoption of vocational innovation in East Lombok can be shown as in Table 4 below.

Table 4: Category of State High School Learning Facilities in the City of Mataram

No	Interval	Frequency	Persentage	Category
1	$X \geq 84$	34	25%	High
2	$71 \leq X < 84$	88	65%	Medium
3	$X < 71$	22	16%	Law
Count		135	100%	

Based on the table above, it can be concluded that the data on the level of innovation adoption of SMK teachers in East Lombok Regency, 25% are in the high category, 47% are in the medium category, and 27% are in the low category.

The hypothesis tested reads that there is a relationship between the characteristics of innovation with the level of adoption of teacher innovation to the curriculum based on KKNI in SMK East Lombok District. Based on the results of the analysis with SPSS version 17, the results obtained are as in Table 5.

Table 5: Correlation Test Results between Innovation Characteristics and Teacher Innovation Adoption Rate

			Characteristics of Innovation	Adoption rate
Kendall's	Karakteristik Inovasi	Correlation Coefficient	1.000	0.569
		Sig. (2-tailed)	.	0.000
		N	135	135
	Tingkat Adopsi	Correlation Coefficient	0.569**	1.000
		Sig. (2-tailed)	0.000	.
		N	135	135

Based on Table 5 obtained that the value of Sig. = 0,000 smaller than 0.05 so it is concluded that there is a relationship between the characteristics of innovation with the level of adoption of teacher innovation to the curriculum based on KKNI in SMK East Lombok District. The correlation coefficient is 0.569 which means that the relationship between the characteristics of innovation with the level of adoption of teacher innovation has a relationship with moderate criteria.

To find out the extent of the effect of innovation characteristics on the level of adoption of teacher work innovation in East Lombok District, a simple regression test was conducted. Simple regression test results are shown in Table 6.

Table 6: Simple Regression Test Results between Characteristics of Innovations and the Level of Adoption of Teacher Innovations

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	R_{Squrae}
	B	Error	Beta			
1 (Constant)	18.673	4.734		3.944	0.000	
Characteristics of Innovation	0.740	0.058	0.741	12.716	0.000	0.549

Based on Table 6 obtained that the value of Sig. 0,000 is smaller than 0.05, meaning that there is an influence between the characteristics of innovation with the level of adoption of teacher work innovation in SMKN East Lombok District. The amount of influence can be seen from the value of Rsqure = 0.549 (54.9%). Thus it was concluded that the characteristics of innovation have a relationship and affect the rate of adoption of teacher work innovation in SMKN East Lombok Regency by 54.9%.

The next hypothesis in this study is to look for the relationship between the characteristics of Innovation with the level of Innovation Adoption of the KKNI-Based Vocational Curriculum in SMK East Lombok District. The analysis shows that the Sig. (0,000) is smaller than 0.05 so it is concluded that there is a relationship between the characteristics of innovation with the level of adoption of teacher innovation to the curriculum based on KKNI in SMK East Lombok District. The correlation coefficient is 0.569 which means that the relationship between the characteristics of innovation with the level of adoption of teacher innovation has a relationship with moderate criteria.

Great influence of the characteristics of innovation on the level of innovation adoption of SMK teachers in East Lombok Regency by 54.9%. This shows that the innovation characteristic is also an important factor towards the level of innovation adopted by the State Vocational School teachers in East Lombok Regency towards the KKNI-based Vocational School curriculum. Information about innovation adoption of the KKNI-based vocational curriculum is widely obtained from the mass media. Kristiansen

et al. (2005) found that media, including the Internet, by SMEs in Tanzania were mostly used as sources of innovation. This explanation is very consistent with the results of this study.

Conclusion

Based on the results obtained in this study, it can be concluded that there is a relationship between the characteristics of innovation with the level of innovation adoption of teachers to KKNI-based SMK curriculum in East Lombok Regency with a percentage of influence of 54.9%. This shows that the differences in the characteristics of innovation make teachers more enthusiastic about adopting innovation.

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