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Analysis of factors affecting the quality of society as human resources in improving the creative industry Kwala Serapuh Village, Langkat

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Abstract

This study aims to analyze the factors that affect the quality of the community as human resources (HR) in improving the creative industry in Kwala Serapuh Village, Langkat. The creative industry is one of the significant economic potentials in the area, and the quality of human resources is an important factor in its development. This research includes a review of several factors that affect the quality of human resources, such as workforce, education level and technological advancement. By analyzing these factors, this study aims to understand how to improve the quality of human resources of the people of Kwala Serapuh Village so that they can contribute more to the development of the creative industry. So far, there were 85 respondents. The method used in this study is multiple linear regression analysis with the help of SPSS v. 25 software. The results of the study show that the labor force has a significant positive effect on the variables of the creative industry community in Kwala Serapuh Lalat Village. The level of education has a significant positive effect on the variables of the creative industry community in Kwala Serapuh Langkat Village. Technological advances do not have a positive and insignificant effect on the variables of the creative industry community in Kwala Serapuh Langkat Village. Meanwhile, simultaneously the workforce, education level and technological advances have a positive and significant effect on the variables of the creative industry community in Kwala Serapuh Langkat Village. The contribution of the influence of this variable is 31.3%.

Keywords: Labor; Education Level; Technological Advancement; Community Quality; Creative Industry

1. Introduction

The creative economy is one of the new economic concepts that intensifies information and creativity as well as Human Resources (HR) as the most important production factor. Products produced from the creative economy are products that have distinctive characteristics, are unique, and different from others. Products produced from the creative economy can also be in the form of a development of products that have existed before. Creativity in the creative economy is something very valuable. The creative economy can be used to maintain the business owned by creating innovation and creation of the products that are marketed. At least the products produced have characteristics that can be remembered by consumers when visiting a certain area or city.

The creative economy is an economic era that has entered the fourth economic wave after the first economic wave, namely the agricultural economic wave, the second wave of the industrial economy, and the third wave of the information economy. The Creative Economy Wave is predicted to help economic growth in Indonesia where most actors in the creative economy are small and medium enterprises. The creative industry subsector refers to the Ministry of Trade of the Republic of Indonesia in 2010, there are 14 subsectors including: advertising, architecture, art markets and goods, crafts, design, fashion, film, interactive games, music, performing arts, publishing and printing, computer services, television and radio, research and development. Home Industry or Household Industry in an economy is one

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of the keys that has a role in addition to being able to improve the economy of a country, small industries are also able to absorb larger Human Resources (HR). Small business activities of the Household Industry indirectly create job opportunities for relatives or neighbors of household industry players.

The creative industry plays an important role in the economy of a country. The role of the creative industry can improve the economy globally. Some people argue that human creativity is the main economic resource. So that currently many industrial sectors are born from the creativity and innovation of each individual. In Indonesia, there are various sectors that are included in the creative industry and the development is increasing every year (<https://agribisnis.co.id/industri-kreatif/>). The creative industry is seen as increasingly important in supporting welfare in the economy, various parties argue that "human creativity is the main economic resource [1] in [2].

Kwala Serapuh Village in Langkat Regency is one of the areas with considerable creative industry potential. The creative industries involve various fields such as art, crafts, design, music, and more. This potential should be a source of significant economic growth in the local community. The quality of human resources can be affected by various factors. Therefore, this research will focus on analyzing factors that affect the quality of the community as human resources in improving the creative industry in Kwala Serapuh Village. Some factors that may play a role include education level, access to creative training, motivation, support from local governments, access to resources, and local culture.

The creative industry is able to actively contribute to the Indonesian economy and can be developed through strategic planning. The development of the creative economy in Indonesia can be supported through increasing the quantity and quality of creative business actors in managing and running their businesses. Human resources in developing the creative industry are indispensable because they have ideas, innovation, and creativity, especially in product development [3]. On the other hand, the improvement of quality human abilities can be formed through qualified education. According to [4] in [5] education, it is a very useful investment for economic development.

According to Barro in [6] technology is one of the most important factors to improve people's living standards in the long run. [7] stated that technology plays a role in the growth of the creative industry. One way to measure the influence of technology on economic growth can be seen from the role of Total Factor Productivity (TFP). TFP is another factor that affects economic growth besides labor and capital. Seeing the role of the creative economy which has the opportunity to become the backbone of the Indonesian economy, this sector has received attention and support from the government. The positive contribution of the existence of the creative economy to the position of the national economy has also been felt by Indonesia. The role of the creative economy for Indonesia should be able to be measured quantitatively as a tangible indicator. This is done to provide a real picture of the existence of a creative economy that is able to provide benefits and has the potential to participate in advancing Indonesia.

Through a deeper understanding of these factors, it is hoped that this research can provide a clearer view of how to improve the quality of human resources of the people of Kwala Serapuh Village so that the creative industry can grow and develop sustainably [8]. In addition, the results of this research can also be the basis for more effective policy-making in supporting the development of creative industries at the village or similar regional level. Thus, this research has significant relevance in the context of local economic development and creative industries in Indonesia.

2. Theoretical studies

2.1. Definition of Creative Industry

Economic development is growing day by day. This is evidenced by the number of new types of industries emerging to try to compete for the national market. That way, the competition will be even tighter so that every economic actor must prepare a more accurate strategy to be able to survive the fierce competition. In a competition or competition, there must be winners and losers. Likewise with competition in the economic field. However, recently there is one type of industry that is expected to have good prospects and be able to compete in the national market, namely the creative industry. The creative industry is a type of business field that utilizes creativity as the main basic material.

Indonesia's creative industry is also often referred to as the cultural industry, where each actor mostly carries local wisdom in the concept or theme that is poured into the work. [9] stated that the creative industry is an industry that comes from the use of skills, creativity, and talents possessed by individuals in creating welfare and jobs. This industry will focus on empowering the creativity and creativity of an individual.

2.2. Government Policy on Creative Industries

In efforts to develop the creative industry, the role of the government also needs to be carried out. This is because the creative industry urgently needs assistance and facilities so that it can be accessed in the market. Not only that, the provision of training is also very necessary so that the Indonesian people are more creative in developing their businesses. The government has a considerable role because it must develop the creative industry from all aspects, such as:

Increasing the quantity and quality of education to support the development of the creative industry. This can be done, such as by facilitating the strengthening and development of educational institutions (formal and non-formal) that support the creation of creativity in strengthening the quality standards of educational institutions.

Increase the quantity and quality of creative workers by providing or facilitating globally recognized workforce certifications and developing a work protection system for creative workers.

Improving creative entrepreneurs who are competitive and dynamic by providing facilities to improve the skills of creative entrepreneurial attitudes.

Increasing the penetration and diversification of the creative work market at home and abroad. This can be in the form of developing an information system regarding export and import regulations, improving the ability of exporters to conduct foreign trade, facilitating partnerships and cooperation in the distribution of local works with other entrepreneurs [10].

2.3. Definition of Community Quality

According [11] [12] to the stated that Quality is a dynamic condition related to products, services, people, processes, and the environment that meet or exceed expectations. Instead, the definition of quality varies from the controversial to the more strategic. According to Garvin in [12], there are five perspectives on quality, one of which is that quality is seen depending on the person who assesses it, so that the product that best satisfies someone's preferences is the highest quality product.

According to [12] in [13] Quality, it is a dynamic condition that affects products, services, people, processes and environments that meet or exceed expectations. According to [14]; [15] Quality is the overall pattern and characteristics in a product or service that supports the ability to satisfy customers both directly and indirectly. The conclusion of the above theory can be defined that quality is a condition that affects products and services that support to provide satisfaction both directly and indirectly.

2.4. Definition of Labor

The workforce is the population of working age who are ready to carry out work or those who are already working, those who are looking for work, those who go to school and those who take care of the household. Labor is all people who are willing and able to do work, including those who are unemployed even though they are willing and able to work and those who are unemployed due to the unavailability of job opportunities (Zenda and Suparno, 2017). Labor based on [16] Chapter 1 article 1 is every person who is able to do work to produce goods and/or services both to meet their own needs and that of the community.

Based on article 102 paragraph 2 regulated in the law, it is explained that in carrying out industrial relations, workers/laborers and their trade unions/labor unions have the function of carrying out work in accordance with their obligations, maintaining order for the smooth running of production, channeling aspirations democratically, developing their skills and expertise as well as participating in advancing the company and fighting for the welfare of members and their families.

The workforce is someone who has entered working age, either already working or actively looking for work, who is still willing and able to do work. The workforce in question is human labor, which can be referred to as Human Resources (HR).

2.5. Definition of Education

Education is the process of systematically transferring knowledge from one person to another according to the standards set by experts. With the transfer of knowledge, it is hoped that it can change behavioral attitudes, thinking maturity and personality maturity into formal education and informal education [17]. Then, according to Sugihartono, education is a conscious and planned effort carried out by educators to change human behavior, both individually and in groups to mature these humans through the teaching and training process. According to [18] education is an effort to attract something in humans as an effort to provide programmatic learning experiences in the form of formal, non-formal, and informal education at school, and outside of school, which lasts a lifetime with the aim of optimizing individual abilities so that in the future they can play an appropriate role in life [18].

Thus, it can be concluded that basically education is a conscious and planned process of knowledge transfer to change human behavior and mature human beings through the teaching process in the form of formal, non-formal, and informal education [19]. According to [17] in [20], education is an indicator that reflects a person's ability to be able to complete a job. With an educational background, a person is also considered capable of occupying a certain position [19]. Education is a very important thing and cannot be separated in the life of the nation and state. The progress and retreat of a nation will be determined by the advancement and retreat of education from a nation.

2.6. Technological Advancements

The use of the term 'technology' in English: technology has changed significantly over the past 200 years. Prior to the 20th century, the term was not common in English, and usually referred to depiction or the applied art of judgment. The term is often associated with technical education, such as *the Massachusetts Institute of Technology* (founded in 1861). The term technology began to gain prominence in the 20th century along with the passage of the Second Industrial Revolution. Understanding technological change was in the early 20th century when American social scientists, started by Thorstein Veblen, translated ideas from the German concept, Technik, into technology.

In the European languages of German and others, there is a distinction between *Technik* and *Technologie*, which is nil in English, as the term is generally translated as *technology*. Technology is the way in which the quality of human life is improved by the introduction of new products, the overall means of providing goods necessary for the survival and comfort of human life. In the Random House Dictionary as quoted by Naisbitt in 2002, technology is as an object, an object, a material and a form that is clearly different from humans. Definition of Technology According to Wikipedia, the largest wiki site in the World, Technology is a whole means to provide the necessary goods for the survival and comfort of human life.

Recent technological developments, including printing presses, telephones and the Internet, have reduced the physical barriers to communication and allowed humans to interact freely on a global scale. However, not all technologies are used for peaceful purposes; The development of increasingly powerful weapons of destruction has taken place throughout history, from batons to nuclear weapons. Technology has affected society and its surroundings in many ways. The root word technology is "techne" which means a set of rational methods related to the creation of an object, or a particular skill, or knowledge of methods and art. In general, technology can be defined as an entity, object or intangible that is created in an integrated manner through actions and thoughts to achieve a value.

3. Analysis methods

3.1. Research Approach

This type of research is a descriptive research with a quantitative approach, which is research aimed at testing theories, building facts, showing relationships between variables, providing statistical descriptions, attracting and forecasting the results with the aim of finding out the influence between one variable and another [21]. According to [22] in [23] the order, the quantitative research process starts from building a hypothesis from a theory, collecting facts or data, using data to test the hypothesis and finally drawing conclusions from the results of data processing.

3.2. Population and Sample

According to [24] in [21] the population it can be interpreted as a generalization area consisting of objects and subjects that have certain qualities and characteristics that are determined by the researcher to be studied and then drawn conclusions. The population in this study is 85 respondents from the household industry community in Kwala Serapuh Langkat village.

According to [25] the sample is part of the number and characteristics that the population has. In this study, sampling uses non-probability sampling with a saturated sampling method. According to [25] saturation sampling is a sampling technique when all members of the population are used as samples. This is done because the population is too small and researchers want to make generalizations with a small degree of error. According to [26] it, if the subject is more than 100, it can be taken 10-15% or 15-25%. But if the subjects are less than 100, then the entire population becomes a research sample, so that the results are obtained as many as 85 respondents.

3.3. Data Analysis Methods

3.3.1. Data Quality Test

Before the data is analyzed and evaluated, the data is first tested by:

3.3.2. Validity Test

According to [22], said that validity is used to measure the validity or validity of a questionnaire, where the questionnaire is said to be valid if the questions on the questionnaire are able to reveal something that will be measured by the questionnaire. The calculation of the Validity test is carried out using SPSS v. 25, with the following criteria:

- If **the rcount > rtable**, then the question item is valid
- If **the calculation < the table**, then the question item is invalid

3.3.3. Reliability Test

According to [22], reliability is a tool to measure a questionnaire which is an indicator of variables. A questionnaire is said to be reliable if a person's answers to questions are consistent or stable over time, not random. The calculation of the reliability test is carried out using SPSS v. 25, with the following criteria:

- If **the ralpha > 0.60** then the statement is reliable
- If **the ralpha < 0.60** then the statement is not reliable

3.3.4. Classical Assumption Test

To produce an accurate data analysis, a regression equation should meet classical assumptions such as normality, multicollinearity, and heteroscedasticity.

3.3.5. Normality Test

Aim to find out whether each variable has a normal distribution or not. The normality test is necessary to perform other variable tests by assuming that the residual value follows the normal distribution. If this assumption is violated then the statistical test becomes invalid and the parametric statistics cannot be used [27]. Data normality detection is used by looking at the data distribution (dots) in the dialog of the data distribution diagram *scatter diagram*). The basis for decision-making is that if the data spreads around the diagonal line and follows the direction of the diagonal line, then the regression model meets the assumption of normality. Conversely, if the data spreads away from the diagonal line and/or does not follow the direction of the diagonal line, then the regression model does not meet the assumption of normality.

3.3.6. Multicollinearity Test

The aim was to test whether a correlation between independent variables was found in the regression model. In a good regression model, there should be no correlation between independent variables or independent variables. If the free variables correlate with each other, then these variables are not orthogonal. The orthogonal variable is an independent variable whose correlation value between the independent variables is equal to zero. The value of Tolerance and variance inflation factor (VIP) can be measured through the SPSS v. 25 program. If the VIP value is <10 and the Tolerant value is > 0.1, it can be concluded that there is no multicollinearity problem, and vice versa.

3.3.7. Heteroscedasticity Test

According to [28] one way to detect the presence or absence of heteroscedasticity is to conduct the Glejser test. The Glejser test proposes to regress the residual absolute value to the independent variable. A regression model can be said to be free from the problem of heteroscedasticity if the points are spread evenly then heteroscedasticity does not occur, on the other hand, if the points accumulate in a place, then heteroscedasticity has occurred.

3.4. Multiple Linear Regression Analysis

The data analysis method used in this study is multiple linear regression. Multiple linear regression analysis is aimed at determining the linear relationship between three independent variables and bound variables. The equations used are:

$$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$$

Information:

Y	= Quality of Human Resources in Improving the Creative Industry
α	= Constant
β	= Multiple Regression Coefficient (<i>Multiple Regression</i>)
X1	= Labor
X2	= Education Level
X3	= Technological Advancement
ε	= <i>Error Term</i>

3.5. Hypothesis Test

3.5.1. Partial Test (*t-Test*)

According to [28] the statistical test t functions to analyze partial regression (free variable with bound variable), then the value used to test the hypothesis is "value - t", then the profitability value can be seen. Another way to see the significance of each variable is to compare the value of the sig in the SPSS output with the level of confidence used in the study (e.g. $\alpha = 5\%$). There are several decision-making policies, namely:

- If Sig > 0.05 then Ho is rejected
- If the sig < 0.05 then Ho is accepted.

3.5.2. Simultaneous Test (*F-Test*)

According to [28] Simultaneous testing aims to test whether all independent variables contained in the model have a simultaneous or simultaneous influence on the dependent variables. As for the criteria for carrying out the F Test, if the value of $F_{cal} < F_{of}$ of the table or the significance value is >from the significant level ($\alpha 0.05$), then there is no simultaneous and significant influence between the independent variables and the bound variables. On the other hand, if the value of $F_{cal} > F_{of}$ of the table or the significance value <from the significant level ($\alpha 0.05$), then there is a simultaneous and significant influence between the independent variable and the bound variable.

3.6. Determinant Coefficient (R2)

This test is used to measure the closeness of the relationship of the determination coefficient, which is a number that shows the magnitude of variance or spread of the independent variables that explain the bound variable or a number that shows how much the bound variable is affected by the independent variable. The magnitude of the determination coefficient is between 0 to 1 ($0 < R^2 < 1$). If R2 is greater closer to 1, it indicates the stronger the influence of the independent variable on the bound variable. If R2 is getting smaller and closer to zero, it can be said that the influence of the independent variable on the bound variable is smaller [28].

4. Results and discussion

4.1. Characteristics of Research Respondents

The characteristics of the respondents were obtained from the results of a questionnaire that had been filled out by 85 respondents in this research object. The characteristics of the respondents that will be described below describe how the state of the respondents studied includes the gender and age of the creative industry community in Kwala Serapuh Langkat Village which is explained in the Table, as follows:

4.2. Respondent Characteristics by Gender

Respondent characteristics by gender can be seen in the Table, as follows:

Based on Table 1, it shows that of the 85 respondents, the highest number of respondents are male respondents, namely 45 respondents or 52.9%, while female respondents are 40 respondents or 47.1%.

Table 1 Respondent Characteristics by Gender Jenis_Kelamin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Man	45	52.9	52.9	52.9
	Woman	40	47.1	47.1	100.0
	Total	85	100.0	100.0	

Source: Data processed with SPSS v.25, 2024

4.3. Respondent Characteristics by Age

The characteristics of respondents by age can be seen in the Table, as follows:

Table 2 Respondent Characteristics by Age

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-30 years old	21	24.7	24.7	24.7
	31-40 years old	39	45.9	45.9	70.6
	>40 years	25	29.4	29.4	100.0
	Total	85	100.0	100.0	

Source: Data processed with SPSS v.25, 2024

Based on Table 2, it shows that of the 85 respondents in this study in the age range of 20 - 30 years, there are 18 respondents or 30.5%, then the number of respondents in the age range of 31 - 40 years is 39 respondents or 45.9% and the respondents in the age range of >40 years are 25 respondents or 29.4%.

4.4. Data Quality Test

4.4.1. Validity Test

The validity test has been carried out on 85 respondents in the creative industry community of Kwala Serapuh Langkat Village. The results of the validity test of the research can be seen as follows:

Table 3 Results of Human Resources Quality Validity Testing in Improving the Creative Industry

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Correlation	Item-Total	Cronbach's Alpha if Item Deleted
Y.1	17.3412	11.418	0.510		0.667
Y.2	17.1647	11.211	0.548		0.655
Y.3	16.8941	12.096	0.498		0.673
Y.4	17.1294	11.900	0.479		0.677
Y.5	17.1412	12.170	0.445		0.687
Y.6	17.2706	13.176	0.268		0.739

Source: Data processed with SPSS v.25, 2024

The results of the validity test on the human resource quality variable in improving the creative industry based on Table 3 show that all the calculated values of each statement item are greater than 0.30, so based on the validity test results, it can be concluded that all statement items used in the HR quality variable questionnaire in improving the creative industry are proven valid and suitable for further testing.

Table 4 Labor Validity Test Results

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Correlation	Item-Total	Cronbach's Alpha if Item Deleted
X1.1	17.7765	13.390	0.562		0.718
X1.2	17.9647	13.415	0.577		0.715
X1.3	17.7529	13.569	0.614		0.707
X1.4	17.9176	12.553	0.640		0.695
X1.5	17.5647	14.177	0.494		0.736
X1.6	17.8471	15.845	0.216		0.807

Source: Data processed with SPSS v.25, 2024

The results of the validity test of the labor variable based on Table 4, show that the entire value of each statement item is greater than 0.30, so based on the results of the validity test, it can be concluded that all statement items used in the labor variable questionnaire are proven valid and suitable for further testing.

Table 5 Results of the Validity Test of Education Level Variables

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Correlation	Item-Total	Cronbach's Alpha if Item Deleted
X2.1	16.6941	12.643	0.385		0.634
X2.2	16.9765	11.357	0.636		0.544
X2.3	17.2000	11.614	0.541		0.576
X2.4	17.4706	13.157	0.346		0.647
X2.5	17.1176	14.748	0.164		0.702
X2.6	17.3059	13.096	0.356		0.643

Source: Data processed with SPSS v.25, 2024

The results of the validity test of the variable of the education level based on Table 5, show that all the calculation values of each statement item are greater than 0.30, so based on the results of the validity test, it can be concluded that all the statement items used in the variable questionnaire of the education level are proven valid and suitable for further testing.

Table 6 Results of the Validity Test of Technological Progress Variables

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Correlation	Item-Total	Cronbach's Alpha if Item Deleted
X3.1	14.3176	5.791	0.365		0.4065
X3.2	14.2706	5.604	0.387		0.450
X3.3	14.4824	5.681	0.261		0.529
X3.4	14.3059	5.762	0.352		0.471
X3.5	14.3412	6.132	0.216		0.551

Source: Data processed with SPSS v.25, 2024

The results of the validity test of the technological advancement variable based on Table 6, show that all the calculated values of each statement item are greater than 0.30, so based on the validity test results, it can be concluded that all the statement items used in the technological progress variable questionnaire are proven valid and suitable for further testing.

4.4.2. Reliability Test

Reliability testing was carried out on 85 respondents in the creative industry community of Kwala Serapuh Langkat Village. The results of the reliability test of each research variable can be seen in the Table, as follows:

Table 7 Results of the Human Resources Quality Reliability Test in Boosting Creative Industries

Reliability Statistics	
Cronbach's Alpha	N of Items
0.722	6

Source: Data processed with SPSS v.22, 2024

Based on Table 7, it shows that the *Cronbach's Alpha* value resulting from the human resource quality variable in improving the creative industry is 0.722. The value is greater than 0.60, so the test results state that they are eligible.

Table 8 Labor Reliability Test Results

Reliability Statistics	
Cronbach's Alpha	N of Items
0.767	6

Source: Data processed with SPSS v.22, 2022

Based on Table 8, it shows that the *Cronbach's Alpha* value generated from the labor variable is 0.767. The value is greater than 0.60, so the test results state that they are eligible.

Table 9 Results of the Education Level Reliability Test

Reliability Statistics	
Cronbach's Alpha	N of Items
0.670	6

Source: Data processed with SPSS v.22, 2022

Based on Table 9, it shows that the *Cronbach's Alpha* value generated from the variable of education level is 0.675. The value is greater than 0.60, so the test results state that they are eligible.

Table 10 Reliability Test Results of Technological Advances

Reliability Statistics	
Cronbach's Alpha	N of Items
0.550	5

Source: Data processed with SPSS v.22, 2022

Based on Table 10, it shows that the value of *Cronbach's Alpha* generated from the variable of technological progress is 0.675. The value is greater than 0.60, so the test results state that they are eligible.

4.5. Classical Assumption Test

4.5.1. Normality Test

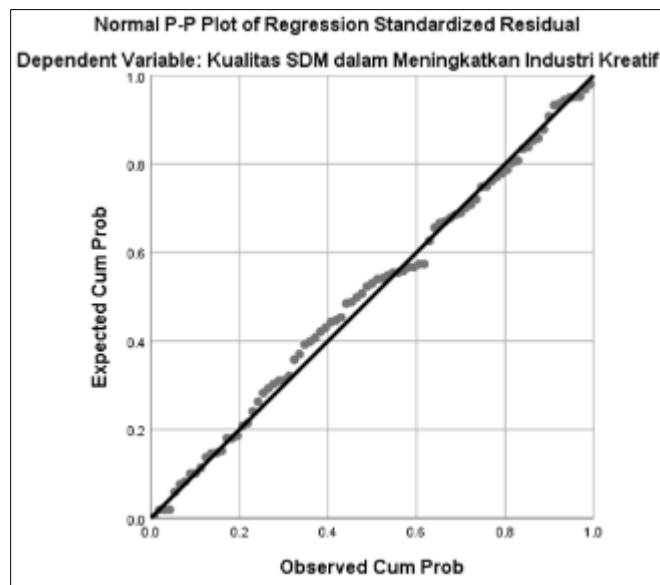
The results of the normality test in this study used the *Kolmogorov-Smirnov* (K-S) non-parametric test . *Kolmogorov-Smirnov* test (K-S) if the probability value is greater than 0.05, then the data is normally distributed, but if the probability value is less than 0.05, then the data is abnormally distributed. The results of the normality test can be seen, as follows:

Table 11 Normality Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Predicted Value
N		85
Normal Parameters ^{a,b}	Mean	20.5882353
	Std. Deviation	2.26356999
Most Extreme Differences	Absolute	0.068
	Positive	0.061
	Negative	-0.068
Test Statistic		0.068
Asymp. Sig. (2-tailed)		0.200 ^{c,d}
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		
d. This is a lower bound of the true significance.		

Source: Data processed with SPSS v.25, 2024

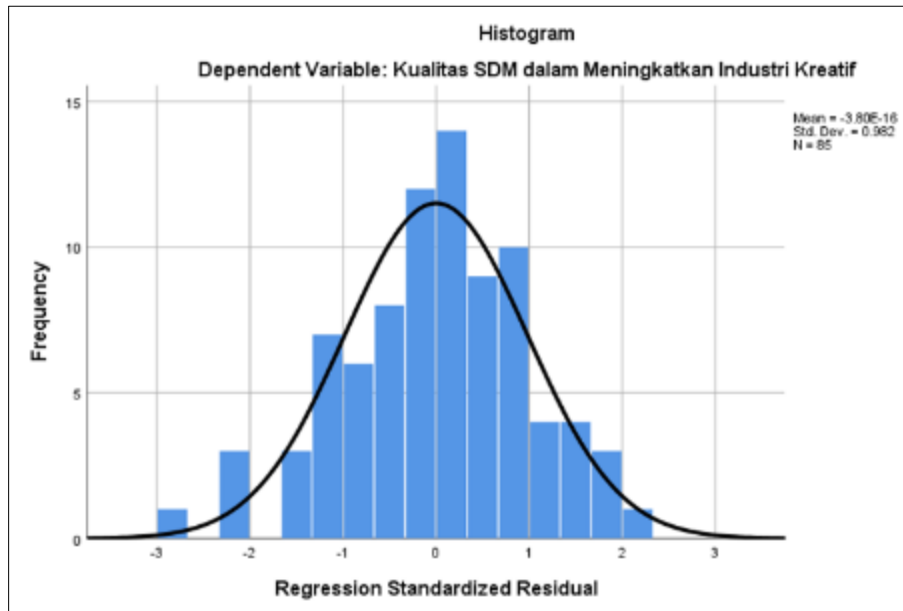
Based on Table 11, it can be seen that the statistical results of the Kolmogorov-Smirnov test of 0.068 are greater than 0.05, so it can be stated that all data are normally distributed. The next normality test is the normal *probability plot* and *histogram* which is a comparison of the actual cumulative distribution of data with the normal cumulative distribution. The test results can be seen as follows:



Source: Data processed with SPSS v.25, 2024

Figure 1 Normal P-Plot Chart

Based on Figure 1, it shows that the distribution of data is around the diagonal line and is not scattered far from the diagonal line, so that the assumption of normality can be met by the test and the test can be continued to the next stage.



Source: Data processed with SPSS v.25, 2024

Figure 2 Histogram Chart

Based on Figure 2, it shows that the shape of the histogram depicts normally or near-normal distributed data because it forms like a bell (*bell-shaped*), so the assumption of normality in this study can be met.

4.5.2. Multicollinearity Test

The results of the multicollinearity test were carried out by looking at the tolerance and variance inflation factor (VIF) values from the results of the analysis using SPSS v. 25. If the tolerance value > 0.10 and VIF <10, it is concluded that there is no multicollinearity problem and vice versa. The results of the multicollinearity test can be shown in the Table, as follows:

Table 12 Multicollinearity Test Results

Coefficients ^a			
Type		Collinearity Statistics	
		Tolerance	VIF
1	Workforce	0.495	2.019
	Education Level	0.502	1.994
	Technological Advancements	0.969	1.032

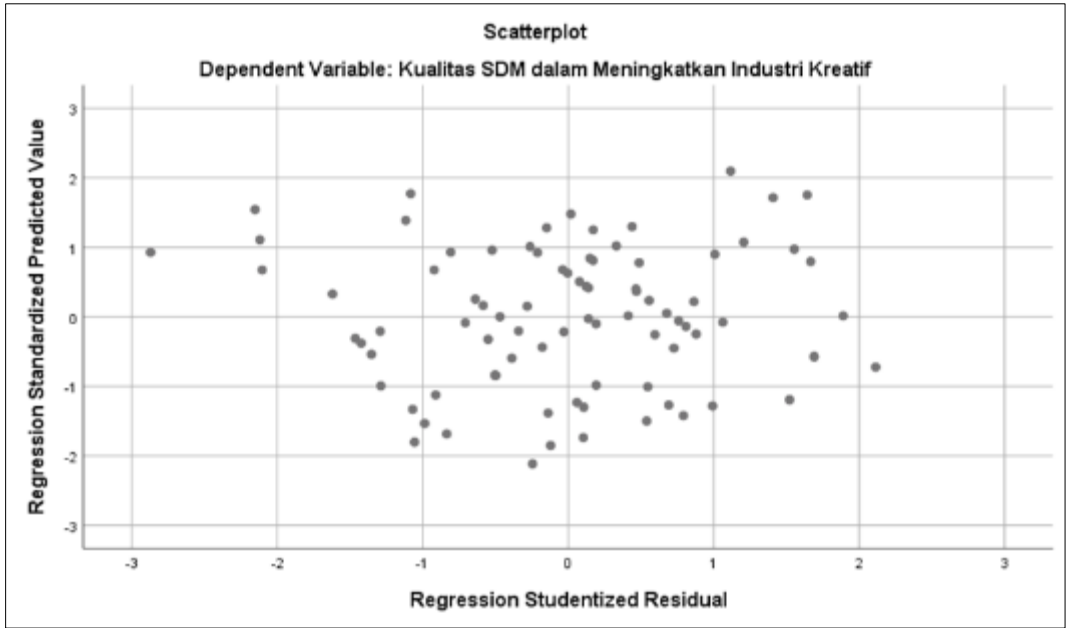
a. Dependent Variable: Quality of Human Resources in Improving the Creative Industry

Source: Data processed with SPSS v.25, 2024

Based on Table 12, it can be seen that the results of the multicollinearity test show that all independent variables do not have a tolerance value of more than 0.10 which means that there is no correlation between independent variables with a value of more than 95%, while the Variance Inflation Factor (VIF) value also shows the same thing, namely no independent variable has a VIF value of approximately 10. It can be concluded that the regression model used in this study and multicollinearity occurs.

4.5.3. Heteroscedasticity Test

The heteroscedasticity test can be explained by the results of graph analysis, namely the scatterplot graph, the points formed must be spread randomly, scattered both above and below the number 0 on the Y axis. The results of the heteroscedasticity test using a scatterplot graph are shown in the figure below:



Source: Data processed with SPSS v.25, 2024

Figure 3 Scatterplot Charts

By looking at Figure 3, which is the scatterplot graph, it can be seen that the dots are scattered randomly, and are scattered both above and below the number 0 (zero) on the Y axis.

4.6. Multiple Linear Regression Analysis

The multiple linear regression analysis test in this study aims to measure how much influence the workforce, education level and technological advancement on the creative industry community of Kwala Serapuh Langkat Village, as follows:

Table 13 Multiple Linear Regression Analysis Test

Coefficients ^a						
Type		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.300	3.048		2.395	0.019
	Workforce	0.266	0.121	0.286	2.189	0.031
	Education Level	0.307	0.127	0.315	2.425	0.018
	Technological Advancements	0.072	0.133	0.051	.546	0.586

a. Dependent Variable: Quality of Human Resources in Improving the Creative Industry

Source: Data processed with SPSS v.25, 2024

Based on Table 13, the results of the multiple linear regression test, the results can be obtained as follows:

$$Y = 7.300 + 0.266X_1 + 0.307X_2 + 0.072X_3 + e$$

It is known that the constant value is 7,300, this value can be interpreted if the workforce, education level and technological advances affect the dependent variable of human resource quality in improving the creative industry, then the value of the dependent variable of human resource quality in improving the creative industry is 7,300.

It is known that the regression coefficient value of the labor variable is 0.266, which is a positive value. This means that when the workforce increases by 1 unit, the quality of human resources in improving the creative industry tends to increase by 0.266.

It is known that the regression coefficient value of the education level variable is 0.307, which is a positive value. This means that when the level of education increases by 1 unit, the quality of human resources in improving the creative industry tends to increase by 0.307.

It is known that the regression coefficient value of the technological progress variable is 0.072, which is a positive value. This means that when technological advances increase by 1 unit, the quality of human resources in improving the creative industry tends to increase by 0.072.

4.7. Hypothesis Test

4.7.1. Test *t* (Partially)

The t-test is used to determine whether the labor variables, education level and technological advancement for the creative industry community of Kwala Serapuh Langkat Village. The results of the test can be seen in the Table, as follows:

Table 14 Test Results t

Coefficients ^a						
Type		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.300	3.048		2.395	0.019
	Workforce	0.266	0.121	0.286	2.189	0.031
	Education Level	0.307	0.127	0.315	2.425	0.018
	Technological Advancements	0.072	0.133	0.051	.546	0.586

a. Dependent Variable: Quality of Human Resources in Improving the Creative Industry

Source: Data processed with SPSS v.25, 2024

Based on Table 14, it can be known that the tcount value of the labor variable t_{count} is 2,189 $>$ t_{table} is 1,662 and the sig $<$ alpha is 0.031 $<$ 0.05, meaning that the labor variable has a significant positive effect on the variables of the creative industry community in Kwala Serapuh Langkat Village.

The tcal value of the variable of the level of education $>$ from the table is 2,425 $>$ 1,662 and the sig $<$ alpha is 0.018 $<$ 0.05, meaning that the variable of education level has a significant positive effect on the variables of the creative industry community in Kwala Serapuh Langkat Village.

The calculated value of the variable of technological progress $<$ from the table is 0.546 $<$ 1.662 and the sig $>$ alpha is 0.586 $>$ 0.05, meaning that the variable of technological progress has no positive and insignificant effect on the variables of the creative industry community in Kwala Serapuh Langkat Village.

4.7.2. Test *F* (Simultaneously)

Test F is used to test whether the variables of labor, education level and technological progress together affect the community of creative industry players in Kwala Serapuh Langkat Village. In this study, the method used is to compare the values of F_{cal} and F_{table} . If $F_{cal} < F_{table}$, then the independent variable simultaneously has no effect on the dependent variable (hypothesis rejected). If $F_{cal} > F_{table}$, then the independent variable simultaneously affects the dependent variable (hypothesis is accepted). The results of the F test in this study can be seen as follows:

Table 15 Test Result F

ANOVA ^a						
Type		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	430.395	3	143.465	12.308	0.000 ^b
	Residual	944.193	81	11.657		
	Total	1374.588	84			
a. Dependent Variable: Quality of Human Resources in Improving the Creative Industry						
b. Predictors: (Constant), Technological Advancement, Education Level, Workforce						

Source: Data processed with SPSS v.25, 2024

Based on Table 15, it can be seen that the value of $F_{cal} > F_{table}$ is $12,308 > 2.33$, while $sig. < \alpha$ is $0.000 < 0.05$, showing that simultaneously the variables of labor, education level and technological progress have a positive and significant effect on the variables of the creative industry community in Kwala Serapuh Lalat Village.

4.8. Coefficient of Determination (R²)

The results of the determination test (R²) in this study can be seen in the Table as, as follows:

Table 16 Determination Coefficient (R²) Results

Model Summary ^b				
Type	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.560 ^a	0.313	0.288	3.41419
a. Predictors: (Constant), Technological Advancement, Education Level, Labor				
b. Dependent Variable: Quality of Human Resources in Improving the Creative Industry				

Source: Data processed with SPSS v.25, 2024

Based on Table 16, the R² (R Square) figure is obtained at 0.313 or 31.3%. This shows that the workforce, education level and technological advancement on the variables of the creative industry community in Kwala Serapuh Langkat Village are 31.3% while the remaining 68.7% are explained or influenced by other variables that are not studied in this study.

5. Conclusion

Based on the results of the research and discussion, the conclusions in this study are as follows:

5.1. Improving the Quality of the Workforce

Carry out training and skill development for village communities who are interested in becoming creative industry players. This training can focus on areas such as design, production, marketing, and business management. Increasing access to information about job opportunities in the creative industry. This can be done by holding seminars, workshops, and exhibitions of the creative industry. Building cooperation with creative industries in other regions to obtain knowledge and technology transfer.

5.2. Improving the level of education

Increasing access to education for village communities, especially for school-age children. This can be done by building new schools, improving the quality of school infrastructure, and providing education fee assistance for underprivileged students. Improve the quality of education by providing training for teachers and providing adequate learning facilities. Promote non-formal education such as courses and trainings that can help village communities to improve their skills.

5.3. Increasing technological advancements

Expand internet access in villages by building adequate internet infrastructure and providing affordable internet services. Improving the digital literacy of village communities by holding training and education on the use of digital technology. Helping creative industry players in the village to utilize digital technology in producing, marketing, and managing their businesses. This can be done by providing mentoring, training, and access to digital platforms.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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