The Effectiveness of Training on Utilization of Internet Technology to Increase Sales of Home Industry Products on the Island of Lombok

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ABSTRACT

The home industries in Lombok Island do not fully understand using internet technology in marketing their products. This study aims to see the effectiveness of the use of internet technology to increase the sales results of home industry products on the island of Lombok. Sampling using a questionnaire spread over 4 classes. Each class consists of 40 people. Furthermore, from the data obtained, a description, normality test, and homogeneity test were carried out. The method used in this research is the Wilcoxon test using the SPSS program. The results showed that after the training was held, there was an increase in understanding of the use of the internet as a means of increasing sales of home industrial products on the island of Lombok.

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A. INTRODUCTION

The number of home industries continues to increase from year to year, but this increase is not matched by the ability to use technology as a material to promote their products. This can be seen from the data released by the *Asosiasi Penyelenggara Jasa Internet Indonesia* (APJII) in 2007 regarding the use of the internet in the field of the economy and business. In this study, the internet was used to find out information about buying daily necessities only 37.82%, while the number of sellers who used the internet as a means of selling online was 16.82%. Based on the difference in the percentage, it shows that there is still a large opportunity for the home industry to use internet technology to promote its products online. The Internet supports global communication and collaboration between employees, consumers, salespeople, and other business partners (Yuliana, 2000). Marketing using the internet can save costs by up to 35% because internet technology is cheaper to develop, operate, and maintain when compared to traditional systems (Prihastono, 2010). Apart from saving costs, internet marketing is also more profitable when compared to traditional selling (Kastner, 1997).

In taking advantage of this opportunity, home industry owners, especially on the Island of Lombok, have not been fully able to use the internet as a means of more modern information and communication technology using the internet (Gazali, Santoso, & Azhar, 2019). Therefore, *Kementerian Pemberdayaan Perempuan dan Perlindungan Anak* (KPPPA) in collaboration with *Asosiasi Perguruan Tinggi Informatika dan*

Komputer (APTIKOM) carried out a Training on Increasing Productivity of Home Industry Players through Information and Communication Technology (ICT), especially the use of internet technology. This study aims to increase the effectiveness of home industry sales through Internet technology.

B. LITERATURE REVIEW

1. Home Industry

The industry has two definitions, namely a general understanding and a theoretical understanding of economics. The home industry is generally defined as companies that carry out operations in the field of economic activities belonging to the secondary sector. Meanwhile, in theory, the home industry is defined as a collection of companies that produce the same goods in a market ((Ananda, 2016). The focus of research in this study is about the home industry. The home industry is an industry that has a limited workforce and the raw materials that are produced are seasonal.

According to *Undang-Undang* No. 3 of 2014 outlining the criteria regarding home industries, namely:

a. A small industry is an industry with a maximum investment value of Rp. 500,000,000, - (five hundred million rupiahs), excluding land and buildings where a business is carried out home industry: number of employees/labor between 14 people, small industry: number of employees/labor between 5-19 people. and

b. Medium industry, namely industry with investment value greater than Rp. 500,000,000, - (five hundred million rupiah) or a maximum of 10,000,000,000, - (ten billion rupiah), excluding land and buildings for business premises. And the number of employees is 20-100 people ((Ananda, 2016).

Meanwhile, according to the Central Bureau of Statistics, defining a home industry is a household business that processes basic materials into unfinished goods or semi-finished goods, semi-finished goods into finished goods or goods with less value become valuable goods. The number of workers for the home industry is at least 5 people and at most 19 people, including the entrepreneurs themselves (Badan Pusat Statistik, 2014).

2. Normality Test

The normality test aims to determine how much the population trend from the sample data is close to normal. Normality can be detected in two ways, namely by graph analysis and statistical tests. Statistical tests can be done by looking at the values of kurtosis and skewness, as well as the Kolmogorov-Smirnov (K-S) non-parametric statistical test. Researchers used the Kolmogorov-Smirnov (K-S) non-parametric statistical test analysis to detect whether the scattered data were normally distributed or not (Didiharyono & Syukri, 2020) and (Fahmeyzan, Soraya, Etmy, & Mataram, 2018).

In testing the approach to a normal distribution using the Kolmogorov-Smirnov method, the hypothesis applies :

H_0: data comes from populations with normal distribution

H_1: data comes from populations with abnormal distribution

The hypothesis will be tested using the following test statistics :

1. If $D_{count} > D_{table}$, then H_0 is accepted and H_1 rejected.

2. If $D_{count} < D_{table}$, then H_0 is rejected dan H_1 accepted.

If the Kolmogorov-Smirnov test is carried out with the help of SPSS, the steps taken are as follows :

1. Select *analyze* → Non-Parametric Test → Legacy Dialog → 1-Sample K-S.

2. In the dialog box, enter the variables to be analyzed and check the normal distribution.

3. After the setting is complete then click OK

The basis for the decision making of the normality test using the *Kolmogorov-Smirnov* is the value of the data significance. If the significance value is greater than 0.05, the data is normally distributed. Meanwhile, if the significance value is smaller than 0.05, the data are not normally distributed. (Sujarweni, 2014).

3. Homogeneity Test

After knowing the level of normality of the data, the homogeneity test is then carried out. The homogeneity test is used to determine the level of similarity in several parts of the sample, namely whether or not the variance of samples taken from the same population is uniform (Suharsimi, 2013), 2010). Homogeneity tests to see the difference between two or more populations. All population characteristics can vary from one population to another. Two of them are the mean and the variant (besides that, there are still distributions, median, mode, range, etc.) (Sugiyono, 2010) and (Alexandersson & Moberg, 1997).

The formulation of the hypothesis on the homogeneity test is as follows:

H_0: the data comes from a homogeneous distribution population

H_1: data comes from a population with a non-homogeneous distribution

Homogeneous or not, it can be seen from the significance value of the results of the homogeneity of variance, while the test criteria are as follows:

1. If the level of significance > 0.05 the data can be declared homogeneous.
2. If the level of significance < 0.05 the data can be declared not homogeneous.

In this study, the homogeneity test used the Levene test using SPSS version 26.0. The homogeneity test steps using SPSS are as follows:

1. Choose Analyze → Compare Means → One Way Anova menu.
2. Perform the dialog box settings.
3. Make adjustments to the options, check Homogeneity of the variance test.
4. Then click OK

4. Test paired sample T-test

The paired-sample t-test is often referred to as the paired sample t-test. The t-test for paired sample data compares the means of two variables for a single sample group. This test calculates the difference between the values of two variables for each case and tests whether the difference in the mean is zero. The data criteria for the paired-sample t-test are (1) Data for each pair tested on an interval or ratio scale, (2) The data is normally distributed and (3) The variance value can be the same or not.

A paired t-test generally tests the difference between the two observations. Tests like this are carried out on subjects who are tested for situations before (Pre Test) and after the process (Post Test), or subjects who are paired or similar (Gooch, 2011).

5. Wilcoxon Test

The Wilcoxon test is a non-parametric test based on paired samples where in this test the data must be sorted first and then further processed (Nurhalimah, Marwanti, Irianto, & Program, 2017). The Wilcoxon test is also used to test the significance or significance of the two-sample comparative hypothesis paired with ordinal scale data.

The Wilcoxon test statistical formula (Gazali *et al.*, 2019) can be calculated using the following formula:

$$z = \frac{T - [n(n+1)]/4}{\sqrt{n(n+1)(2n+1)/24}} \tag{1}$$

Information:

Z = the calculated Wilcoxon value

T = calculation result (in the form of a smaller level)

n = The number of observations after deducting the pairs that have a difference 0

The hypothesis formulation in the Wilcoxon test is as follows:

H_0: there is no difference in the readiness of participants in the Pre Test and Post Test groups

H_1: There are differences in the readiness of participants in the Pre Test and Post Test groups

Decision making on the Wilcoxon test can be obtained using the Z test. The basis for decision making is the same as the z test, namely: (1) If Zcount <Ztable then H_0 is accepted, (2) If Z-count> Z-table then H_0 is rejected.

C. RESEARCH METHOD

1. Data Sources

The data used in this study are primary. The data were obtained from the results of ICT utilization training conducted on Home Industry (IR) players. The total data is 160 which is divided into 4 classes, each class consisting of 40 training participants.

2. Research Variables

There are two variables used in this study, namely the Pre Test variable and the Post Test variable. as for the two variables can be seen in table 1

Tabel 1. Research Variables

Variable	Variable Description
X1	The total value of Pre Test results
X2	The total value of the Post Test results

3. Research Methods

The research methods used in this study are as follows:

a. Describe the results of the Pre Test and Post Test values.

b. Performing data assumption tests, namely the normality test and homogeneity test.

c. Data analysis, if the data is normally distributed, the paired T-Test will be used, and if the data is not normally distributed the Wilcoxon test will be used.

d. Interpretation of results and conclusions. (Santoso, 2019).

D. RESULTS AND DISCUSSION
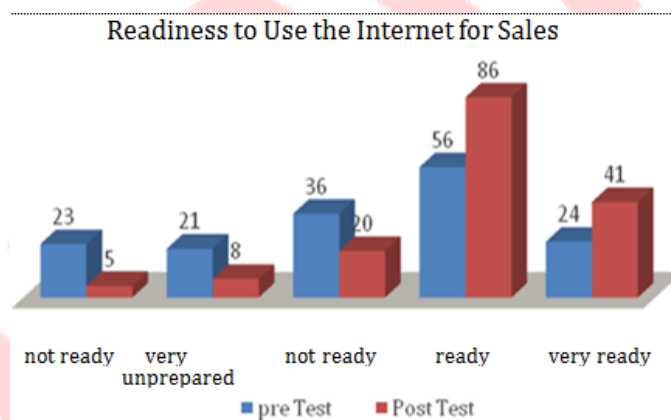
1. Descriptive Analysis

Figure 1. Readiness to Use Information Technology (Internet) for Sales

Based on Figure 1, it is found that the readiness of participants to use the internet before being given training (Pre Test) is 57.14% while after being given training materials for a full day (Post Test) the readiness of participants to use the internet to increase sales results is 90.71%. There was an increase in the percentage of readiness by 33.57%, descriptively it can be said that the training carried out was effective, but to be more convincing it would be tested with the t-test and Wilcoxon.

2. Normality Test

The following are the results of the normality test output using the Kolmogorov-Smirnov processed using the SPSS 26.0 program as Table 2

:

Tabel 2. Normality Pre Test dan Pos Test

	Kolmogorov-Smirnov[a]		
	Statistic	Df	Sig.
Pre Test	.228	160	.000
Pos Test	.321	160	.000

a. Lilliefors Significance Correction

Based on the Normality Test, the significance value for the Pre Test and Post Test groups was 0.000. Because of the significant value of the Pre Test and Post Test groups < 0.05, based on the decision making of the two groups the distribution was not normal.

3. Homogeneity Test

The following is the result of the homogeneity test output using the Levene test which is processed using the SPSS 26.0 program as Table 3:

Table 3. Homogeneity Test Pre Test

		Levene Statistic	df1	df2	Sig.
Pre_Test	Based on Mean	.596	3	156	.618

Table 3 shows that the significance value of the participant frequency for the use of internet technology (Pre Test) is 0.618. So based on the decision above, the variance of the Pre Test data is homogeneous because the significance value is greater than 0.05 (0.618> 0.05).

Table 4. Homogeneity Test Post Test

		Levene Statistic	df1	df2	Sig.
Pos_Test	Based on Mean	3.215	3	156	.025

Based on Table 4, it is known that the significance value of the participant's willingness to use internet technology (Post Test) is 0.025. So the decision making above is that the variance of the Post Test data is not homogeneous because the significance value is smaller than 0.05 (0.025 <0.05).

4. Wilcoxon Test

The results of the normality and homogeneity tests on the assumption test are known to be not normally distributed and not homogeneous so that the data cannot be analyzed using the T-Test. To confirm the magnitude of this increase, the Wilcoxon test was carried out.

Table 5. Wilcoxon Rank Test Pre Test and Post Test

	Ranks			
		N	Mean Rank	Sum of Ranks
Pos_Test - Pre_Test	Negative Ranks	15[a]	76.57	1148.50
	Positive Ranks	97[b]	53.40	5179.50
	Ties	48[c]		
	Total	160		

a. Pos_Test < Pre_Test
b. Pos_Test > Pre_Test
c. Pos_Test = Pre_Test

The results of the analysis using the Wilcoxon test are presented in Table 5, namely, of the total respondents 160 people found 15 (9.38%) participants who were not ready to use the internet as a medium for selling their products, and the remaining 97 (60.62%) participants who had ready to use the internet as a medium to sell their products and there were 48 (30%) participants who were still in doubt.

Table 6. *Wilcoxon Pre Test and Post Test Statistics*

Test Statistics	
	Pos_Test - Pre_Test
Z	-6.011[b]
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test
b. Based on negative ranks.

From the calculation results in table 6, it is known that the Asymp. Sig. (2-tailed) of 0.000 less than 0.05, it can be concluded that there is a significant influence between pre-training and post-training on the readiness of participants to take advantage of the use of the internet in increasing the sales of their products on Lombok Island.

E. CONCLUSION AND SUGGESTION

From the data from the analysis, it can be concluded that after the training was held, there was an increase in understanding of the use of the internet as a means to increase the sales results of home industry products on the island of Lombok, indicating that the training was running effectively. This is evident from the large percentage of participants who are ready to use the internet as a medium to sell their products of 60.62%.

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