

CORRELATION OF THE USE LEARNING REPORT APPLICATION AND AUTHENTIC ASSESSMENT OF 2013 CURRICULUM ON ELEMENTARY TEACHERS' PERFORMANCE IN BANTUL REGENCY

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Abstract

This research aims to analyze the relationship of using the student report application and the authentic assessments of curriculum 2013 to the elementary school teachers' performance in Bantul regency. The main background for conducting this research is because the majority of teachers in Bantul Regency have used this application in their assessment. This research uses the survey method for elementary school teachers in Kapanewon Kasihan, Bantul Regency. The research sample is taken using a simple random sampling technique of 150 teachers among the whole 240 elementary school teachers. This research uses a quantitative approach with correlational descriptive, and the instrument in this research was a questionnaire using a Likert scale model through the Goggle Form online. The data is processed in the multiple linear regression analysis method tabulated with the SPSS for version-26 Windows program. The hypothesis test uses the product moment correlation which previously carried out pre-requisite tests which included normality test, homogeneity test and linearity test. The results shows that: (1) there is a significant relationship between the students report application and teacher performance, based on the hypothesis test results, a correlation value of 0.762 is obtained with a sig value of 0.000 <0.05; (2) there is a significant relationship between authentic assessment and teacher performance, this is based on the results of the hypothesis test which obtains a correlation value of 0.757 with a sig value of 0.000 <0.05; (3) there is a significant relationship between the use of student report application and the implementation of authentic assessment applied together on the performance of elementary school teachers with a double correlation value of 0.857 and R Square of 73.4%. The result of this research indicates that there is a positive and significant relationship between the student report application and authentic assessments with the performance of elementary school teachers in Kapanewon Kasihan, Bantul Regency.

Keywords: Student Report Application, Authentic Assessment, Teacher Performance

INTRODUCTION

Teachers are educational staffs who have a role as a determiner factor for educational goals success. Teachers are the main figure of educational activities, especially those related to teaching and learning activities. The quality of education is essentially reflected in the quality of a learning process. Therefore, schools will not experience quality improvement without the improvement of professionalism and teachers performance

quality in managing learning activities. In the current era of globalization, education is something needed to keep up with the times. In other words, education will not run properly if it is not supported by various sectors, one of which is technology.

Technology has now entered the realm of education thus the existence of technology can increase productivity and work effectiveness. Current technological

developments have led to significant changes. This development also causes changes for human resources because they are required to obtain accurate and up-to-date information. The increasing use of technology in the field of education today is expected to ease teachers in conducting their daily activities both in teaching and preparing its administration.

In the National Education Minister Regulation Number 16 of 2007 concerning Academic Qualification Standards and Teacher Competencies, there are four competencies which must be mastered by teachers including pedagogic competence, professional competence, individual competence, and social competence. In the pedagogic competence, it is stated that a teacher must be able to use and utilize information and communication technology for the benefit of learning. Therefore, teachers are required to be able to use and utilize information and communication technology as media in the daily learning process. According to Rusyan (2014: 28) to have the ability and expertise, teachers are required to increase their knowledge, use and master technology either computers or other technological tools that can be used in learning.

Sagala (2009:31) states that pedagogic competence consists of Sub-Competencies: (1) contributing to the development of KTSP curriculum related to the subjects being taught, (2) developing a syllabus of subjects based on competency standards and basic competencies, (3) planning a lesson plan based on the syllabus that has been developed, (4) designing learning management and classroom management, (5) implementing pro-change learning (active, creative, innovative, experimental, effective, and fun learning), (6) assessing students learning outcomes authentically, (7) guiding students in various aspects such as personality, talents, interests, and careers, and lessons, and (8) developing professionalism as a teacher.

Efforts to improve teachers' performance in terms of pedagogic competence and technological skills are by developing teachers' potential and involving their role in it. The performance and pedagogic competence of teachers bear the main responsibility in the transformation of student orientation from ignorance to knowing, from dependence to independence, from unskilled to skilled by using learning methods that are always able to comprehend and adapt to new information (Widodo, 2019).

One of the technology uses in education is the use of digital report application for processing students' score and making learning report for the 2013 curriculum. Based on relevant research, Muhammad Ali Nurdin (2020) states that the use of digital report platform literates teachers in technology. In addition, teachers are also required to be able to take advantage of this application. Learning report which was usually manual now is switched to digital thus it can manage students' learning outcomes quickly, precisely, accurately, effectively and efficiently.

The existence of learning report application eases teachers in processing students' score. By the use of this application, teachers can process students' score faster and more efficient, manage their time to do other main tasks, explore learning material taught to students, evaluate the students' achievement results and follow it up so that teacher performance will certainly be more effective and efficient. This is in line with the results of Huda's research (2020) explaining that the digital report application helps teachers to input grades effectively, efficiently, accurately, quickly, and precisely. Besides, learning report application is used to archive students' learning outcomes. However, there are several obstacles felt by teachers, especially for elderly teachers. They are required to be able to keep up with the times when technology now has been used

in various elements of society, including teachers. This condition urges the elderly teachers to ask for help or repeat the exercises to ease the implementation process.

Based on preliminary study conducted by the researcher in several elementary schools in Bantul Regency, one of the challenges in implementing 2013 curriculum is the problem of assessing and preparing student learning report. The 2013 curriculum learning report no longer contains numbers only, but emphasizes the description of the three student assessments, namely cognitive, affective, and psychomotor. If this assessment is carried out manually, it will certainly be troublesome for the teacher because each student learning report has seven sheets that must be filled out completely with a description. This is in line with the research results of Esnaria Purba (2020) which states that teachers still experience problems in composing 2013 curriculum

learning report, especially in processing the students' scores which consist of attitude, knowledge, and skill aspects.

The emergence of the 2013 curriculum learning report application urges teachers in Bantul Regency to use it in the assessment process. The learning report application is developed by the Education Department of Bantul Regency, where the researcher belongs one of the developers. This application was created as a form of answer toward teachers anxiety where the assessment process in the 2013 curriculum is quite complicated and more complex than the previous curriculum. Besides, many teachers in Bantul Regency do not fully understand how the assessment process itself is. In 2013 curriculum, Elementary School learning report application used by teachers is actually a modification and development of Microsoft Excel. The learning report application menu display can be seen in the following Figure 1.



Figure 1. Home Menu Display of Learning Report Application

Based on the explanation above, the researchers conducted a study on the correlation between the use of 2013 curriculum learning report application and authentic assessment with the performance of elementary school teachers in Bantul Regency. The main background of this research is the fact that majority of public elementary school teachers in Bantul Regency have used this application in their assessment. The results of this study can be used as a basis consideration for supervisors or schools in the use of learning report applications and the

implementation of authentic assessments of the 2013 curriculum.

METHOD

This research belongs to a quantitative research using survey method. The population used in this study was elementary school teachers in the Bantul Regency. Bantul Regency has 17 districts, out of the 17 districts, Kasihan District was chosen by purposive sampling. The researcher chose Kasihan District as the place for data collection because it has the highest number of teachers and public elementary schools compared to other

districts. In addition, most of the teachers at Kasihan District already have educator certificates. In this district, there are 25 public elementary schools, with a total of 240 grade teachers involved in educational implementation activities.

Sample is part of the population that has certain characteristics or condition to be studied. Sampling in this study used simple random sampling technique, where the sample can represent a very large population. According to Sugiyono (2018:124) all members of the population have the same opportunity to be taken as members of the sample. Sampling with random sampling technique used was using the Slovin technique.

The number of samples used in this research is calculated in the following calculation.

$$n = \frac{240}{(240)(0,05)^2 + 1} = \frac{240}{0,6 + 1}$$

$$n = \frac{240}{1,60} = 150$$

$$n = 150$$

Based on the calculation result above, the number of samples used in this study was 150 teachers at State Elementary School in Kasihan District, Bantul Regency. After selecting and assigning 150 people randomly from the existing people as the sample, the next step was to calculate the proportion of population size for each school by proportionate stratified random sampling.

The data analysis technique used in this research was product moment correlation analysis. It was used to find out the relationship between the independent variable (X) and the independent variable (Y). Before testing the hypothesis, the assumption test was carried out first, which included the normality test and linearity test. All data analysis techniques in this study were carried out by using the SPSS 26.0 for Windows program. Then, to find out the correlation between the Learning Report Application (X1) and Authentic

Assessment (X2) together with Teacher Performance (Y), multiple correlation statistics was used.

Validity test of this research used r_{count} and r_{table} test criteria. The validity test in this research was carried out on all variables consisting of 20 statements related to learning report application variable instrument, 20 authentic assessment variable instrument statements, and 21 teacher performance variable instrument statements. Then, n (sample) 30 people with significance level $\alpha = 0.05$, it was obtained the r table value of 0.361. Based on the validity test calculation using SPSS version 26 for windows, it can be seen that all statement items are declared valid with r_{table} values ranging from 0.494 to 0.917 with Cronbach Alpha values > 0.60 .

The data normality test of this research used the Kolmogorov-Smirnov test in the SPSS application program with a probability level (sig) of 0.05. The test criteria for the Kolmogorov-Smirnov test are the probability value (sig) > 0.05 . If this probability achieved the data is normally distributed. However, if the probability value (sig) < 0.05 , the data is not normally distributed. Based on the results of the sample test with Kolmogorov-Smirnov, the learning report application variable has an *Asymp. Sig.* = 0.254, the authentic assessment variable has an *Asymp Sig.* = 0.220, and the teacher's performance variable has an *Asymp. Sig.* = 0.412. Based on the results of sample test with Kolmogorov-Smirnov, each variable has an *Asymp. Sig.* value more than 0.05 which means that all data are normally distributed. Therefore, it can be concluded that the data of this study meet the requirement of the normality assumption.

RESULTS AND DISCUSSION

To find out whether there is a correlation between the independent variable (X) and the dependent (Y), a partial correlation test was conducted by using the Product Moment Correlation

technique through SPSS version 26. The significance criterion is "if the value of Sig. < 0.05 then H_0 is rejected and H_a is accepted. It means that "there is a significant relationship between the independent variable (X) and the dependent variable (Y)". Meanwhile, "if the value of Sig. > 0.05 then H_0 is accepted and H_a is rejected", it means that "there is no significant relationship between the independent variable (X) and

the dependent variable (Y)". To find out whether there is a relationship between the Learning Report Application (X1) and Authentic Assessment (X2) variables together with Teacher Performance (Y), a multiple correlation test was carried out using SPSS version 26. The criteria and estimates of the correlation strength between variables can be seen in the following Table 1.

Table 1. Guidelines For The Interpretation Of Correlation Coefficients

| Coefficient Interval | Correlation Level |
|----------------------|-------------------|
| 0,000 – 1,990 | Sangat Rendah |
| 0,200 – 0,399 | Rendah |
| 0,040 – 0,599 | Sedang |
| 0,600 – 0,799 | Kuat |
| 0,800 – 1,000 | Sangat Kuat |

To find out whether there is a correlation between the learning report application variable and the teacher's performance, the Correlation Product

Moment technique was used through SPSS version 26. The results of the Correlation Product Moment calculation are presented in the following Table 2.

Table 2. The Report Correlation of Learning Report Applications on Teachers' Performance

| | | Aplikasi Rapor | Kinerja Guru |
|----------------|---------------------|----------------|--------------|
| Aplikasi Rapor | Pearson Correlation | 1 | .762** |
| | Sig. (2-tailed) | | .000 |
| | N | 150 | 150 |
| Kinerja Guru | Pearson Correlation | .762** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 150 | 150 |

** . Correlation is significant at the 0.01 level (2-tailed).

Based on the data above, the correlation value obtained is 0.762. Then, the value of correlation coefficient can be consulted with the r_{table} with $N = 150$ at a significance level of 5% that is 0.159. Because the value of the correlation coefficient is greater than r_{table} ($0.762 > 0.159$) and there is negative sign (-) in front of the number, it can be concluded that there is a positive and significant correlation between the learning report application to teachers' performance. The positive and significant correlation meant is a meaningful or important correlation. This shows that an increase in the ability of teachers to process grades using the

learning report application leads to an increase in the performance of elementary school teachers in Kasihan District, Bantul Regency.

The results of this study are supported by the results of Muhammad Akhid Fahsya's research (2019), entitled *Correlation of the Use Digital Learning Report Applications on the Performance of State Elementary School Teachers in Tuban Village in the 2019/2020 Academic Year*. Muhammad Akhid Fahsya's research concludes that there is a significant positive relationship between the application of learning report and teachers performance, the calculated r value of

0.293 is greater than r_{table} at a significant level of 5% that is 0.291. This means that H_0 is rejected and H_a is accepted, so it is stated that the correlation of the X1 variable with Y variable is significant which means that there is a positive and significant correlation between the use of the Digital Learning Report Application and the performance of State Elementary School teachers in Tuban Village, Badung.

Based on the results description described above, it is concluded that the use of learning report application has a positive correlation in achieving good teacher performance. By using learning report application, teachers can compose their students' score easier and the

Table 3. The Correlation of Authentic Assessment to Teacher Performance

| | | Kinerja Guru | Penilaian Autentik |
|--------------------|---------------------|--------------|--------------------|
| Kinerja Guru | Pearson Correlation | 1 | .757** |
| | Sig. (2-tailed) | | .000 |
| | N | 150 | 150 |
| Penilaian Autentik | Pearson Correlation | .757** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 150 | 150 |

** . Correlation is significant at the 0.01 level (2-tailed).

The results of the authentic assessment variable questionnaire distribution were processed in the analysis of hypothesis testing. Based on this analysis, it is obtained a correlation coefficient of 0.757. Then the correlation coefficient value can be consulted with the r_{table} value with $N = 150$ at a significance level of 5% that is 0.159. Because the value of correlation coefficient is greater than r_{table} ($0.757 > 0.159$) and in these results there is no negative sign (-) in front of the number, it can be concluded that there is a positive and significant correlation between authentic assessments of teacher performance. The positive and significant correlation meant is a meaningful or important relationship. This result shows that an increase in the ability of teachers to carry out authentic assessments leads to an increase in the performance of elementary school teachers in Kasihan District, Bantul Regency.

processing score becomes faster, effective, and efficient. Besides, the teacher can manage his time to do other teacher's main tasks, explore the lesson material taught to students, evaluate the students' achievement results, and follow it up so that the teacher's performance will certainly be better.

To find out whether there is a correlation of Authentic Assessment variable on Teacher Performance, the Correlation Product Moment technique was used by using SPSS version 26. The results of the Correlation Product Moment calculation are presented in the following Table 3.

In line with a research conducted by Riyon Arthur (2019), it concludes that by providing assistance in developing authentic assessments of 2013 curriculum, teachers can increase their knowledge and insight, stimulate their own motivation in designing assessments in each lesson, and support the mastery of teacher professional competence thus teacher's performance will increase.

This research results are also supported by Samsul Adianto (2020)'s research which states that authentic assessments carried out by teachers can help teachers to find out (1) whether students have reached the minimum completeness criteria, (2) whether subject matter being taught is appropriate for students, (3) whether the strategies, methods and approaches used are appropriate, and (4) ease teachers to provide evaluation materials that are in accordance with the students needs. By

these results, learning and teachers performance will experience an increase.

Based on the results described, it is obtained a conclusion that the implementation of authentic assessment has a positive and significant correlation in achieving good teachers' performance. With authentic assessment, the teacher will be able to find out where the strengths and weaknesses of their students are as well as know whether the methods and approaches used by the teacher in teaching are appropriate or not.

Teacher performance is the ability and effort of teachers to carry out learning tasks as well as possible in designing learning programs, managing learning, conducting evaluations, analyzing evaluation results, and developing learning quality. In learning, a teacher cannot be separated from the assessment toward his students. The assessment is carried out comprehensively to assess several aspects such as attitudes, knowledge, skills started from the inputs, processes, and its learning Table 4. Multiple Correlation Test Results

outputs. Therefore, it is necessary to choose the right method in the teaching and learning process and teachers must be more prepared in setting up assessment instruments to be used in learning. The learning report application helps the processing of scores easier where the score processing is faster and more efficient. Besides, the teacher can manage time to do other teacher main tasks, explore the material to be taught to students, evaluate the students' achievement, and follow it up thus teachers' performance will certainly be more effective and efficient. Therefore, it is suspected that there is a positive correlation between the use of learning report application and authentic assessments with teacher performance.

To find out whether or not there is a correlation between the Learning Report Application and Authentic Assessment variables together with Teacher Performance, a multiple correlation test was conducted by using SPSS version 26 are presented in the following Table 4.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|-------|-------------------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|---------------|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .857 ^a | .734 | .730 | 2.967 | .734 | 202.594 | 2 | 147 | .000 |

a. Predictors: (Constant), Penilaian Autentik, Aplikasi Rapor

Based on the results of the multiple correlation test, it can be seen that the correlation between the learning report application (X1) and authentic assessment (X2) together on teacher performance (Y) obtains a correlation coefficient value of 0.857 and based on this result there is no negative sign (-) in front of the number thus it can be concluded that there is a positive and significant correlation between the use of learning report application and authentic assessment concurrently with teachers' performance. The correlation results are presented in table 1. Based on the table, it can be seen

that the value of correlation coefficient is in the interval of 0.80 – 1,000 which shows a very strong correlation level. Besides, the coefficient of determination is 0.734 and indicates that the contribution of the learning report application use and the implementation of authentic assessments concurrently is 73.4%, the remaining 26.6% is affected by other variables not examined in this study.

The use of learning report application cannot be separated from the authentic assessment of 2013 curriculum. The learning report application helps teachers to input students' score quickly,

precisely, accurately, effectively, and efficiently. Moreover, archiving students' learning achievements becomes easier. This is in line with the results of several previous studies, both research examining the correlation between report cards applications and teacher performance and research examining the correlation between authentic assessments and teacher performance.

Based on the results description described above, it is concluded that the use of learning report application and authentic assessment concurrently has a positive correlation in achieving good teachers' performance. By using the learning report application, teachers become easier and faster to process the students' score. Moreover, the teacher can manage their time to do other main tasks, prepare lesson plans properly, evaluate the students' achievement results, and follow it up thus the learning and teachers' performance will increase.

CONCLUSIONS

Based on the research findings and discussion, the conclusions of this research are presented in the following statements. Based on the partial correlation test of the learning report application variable (X1) on teacher performance (Y), it can be seen that the correlation value is 0.762 with Sig. = 0.000. Since the value of Sig <0.05 means H_0 is rejected and H_a is accepted, it is stated that the correlation between X1 and Y variables is significant or meaningful. Therefore, it can be concluded that there is a significant positive correlation between the uses of learning report application on teacher performance. This finding shows that the increase of teachers' ability to process scores using the learning report application leads to an increase in the performance of elementary school teachers in Kasihan District, Bantul Regency. Based on the partial correlation test of authentic assessment variables (X2) on teacher performance (Y) it can be seen that the correlation value is 0.757 with Sig. = 0.000. Since the value of Sig <0.05

means H_0 is rejected and H_a is accepted, it is stated that the correlation between X2 and Y variables is significant or meaningful. Therefore, it can be concluded that there is a significant positive correlation between authentic assessment mastery and teacher performance. This finding shows that an increase in the teachers' ability to carry out authentic assessments leads to an increase in the performance of elementary school teachers in Kasihan District, Bantul Regency. Based on the multiple correlation test of learning report application (X1) and authentic assessment (X2) concurrently on teacher performance (Y), it is obtained r of 0.857 with a value of sig.F change 0.000 <0.05 which means H_0 is rejected and H_a is accepted thus it is stated that the correlation between variables X1 and X2 concurrently with variable Y is significant or meaningful. Therefore, it can be concluded that there is a significant positive correlation between the use of learning report and authentic assessments concurrently on the performance of elementary school teachers. This finding shows that the increase of teachers' ability to process authentic assessments using the learning report application leads to an increase in the performance of elementary school teachers in Kasihan District, Bantul Regency.

REFERENCES

- Adianto, S., Ikhsan, M., & Oye, S. (2020). Penilaian Autentik Pada Kurikulum 2013 Dalam Pembelajaran Tematik Di Sekolah Dasar. *JINOTEP (Jurnal Inovasi Dan Teknologi Pembelajaran): Kajian Dan Riset Dalam Teknologi Pembelajaran*, 7(2), 133–142. <https://doi.org/10.17977/um031v7i22020p133>
- Arthur R. (2019). "Pendampingan Dalam Pengembangan Penilaian Autentik Untuk Meningkatkan Kinerja Guru Di Wilayah Binaan Tangerang." *Sarwahita* 16(01):1–9.

- Fahsyah, M. A. (2020). Korelasi Penggunaan Aplikasi Raport Digital Terhadap Kinerja Guru SD Negeri di Kelurahan Tuban Tahun Pelajaran 2019/2020. *Jurnal Faidatuna*, 50-62.
- Fauziah, T., Alawiyah, T., & Ruslan. (2016). Kendala Guru dalam Menerapkan Penilaian Autentik di SD Kabupaten Pidie. *Jurnal Ilmiah Mahasiswa Pendidikan Guru Sekolah Dasar*, 1(1), 147–157. <https://media.neliti.com/media/publications/188254-ID-kendala-guru-dalam-menerapkan-penilaian.pdf>
- Ghozali, I. (2018). *Aplikasi Analisis Multivariete SPSS 25* (9th ed.). Semarang: Universitas Diponegoro.
- Hamzah B. Uno (2015). *Teori Kinerja dan Pengukurannya*. Jakarta: Bumi Aksara
- Haryani, F. (2021). Efektifitas Penggunaan Aplikasi Rapor Dalam Meningkatkan Kinerja Guru Kelas di Madrasah Ibtidaiyah Negeri 3 Kota Lhokeumawe. *Jurnal Bina Gogik*, 127-144.
- Huda, F. (2020). Pemanfaatan Sistem Pengelolaan Rapor Berbasis Aplikasi K13 Profesional di SMKN 6 Kota Bengkulu. *JDER Journal of Dehasen Education Review*, 72-81.
- Jogiyanto. (2006). *Sistem teknologi informasi Edisi II* Yogyakarta. Yogyakarta: Andi Offset.
- Kementerian Pendidikan dan Kebudayaan (2014) *Materi Pelatihan Guru Implementasi Kurikulum 2013 Kelas V*. Jakarta: Badan Pengembangan Sumber Daya Manusia Pendidikan dan Kebudayaan dan penjamin Mutu Pendidikan
- Kharish, M. I. N. (2021). Pengembangan Sistem Aplikasi Raport Berbasis Web pada Sekolah Dasar Studi Kasus di SD Sekolah Pelangi Bangsa, Pamulang, Tangerang. *Journal of Artificial Intelligence and Innovative Applications*, 2(1), 72–76.
- Kunandar. (2020). *Penilaian Autentik (Penilaian Hasil Belajar Peserta Didik Berdasarkan Kurikulum 2013)*. Jakarta: PT. Raja Grafindo Persada.
- Kusmianto. (2013). *Panduan Penilaian Kinerja Guru Oleh Pengawas*. Jakarta: Depdiknas.
- Majid, A. (2012). *Perencanaan Pembelajaran: Mengembangkan Standar Kompetensi Guru*. Bandung: Remaja Rosdakarya
- Muslich, M. (2014). *Authentic Assesment: Penilaian Berbasis Kelas dan Kompetensi*. Bandung: Refika
- Nurudin, M. A. (2020). Implementasi Aplikasi Rapor Digital Madrasah dalam Penilaian Hasil Belajar Peserta didik. *Journal of Islamic Elementary Education*, 67-78.
- Nurfauziyyah, R. (2009). Hubungan Penggunaan Aplikasi Raport Digital Dengan Kinerja Guru (Penelitian di Madrasah Tsanawiyah Negeri se-Kabupaten Sumedang), *Tesis*. Bandung: UIN Sunan Gunung Djati Bandung, 2009
- Ruslan. (2016). Kendala Guru dalam Menerapkan Penilaian Autentik di SD Kabupaten Pidie. *Jurnal Ilmiah Mahapeserta didik Pendidikan Guru Sekolah Dasar*, 147-157.
- Rusyan, H.A. (2014). *Membangun Guru Berkualitas*. Jakarta: PT. Pustaka Dinamika.
- Sagala, S. (2009). *Kemampuan Profesional Guru dan Tenaga Kependidikan*. Bandung: Alfabeta.
- Sistem Aplikasi Pengolahan Nilai Raport SDN Tanjunganom 2 Kecamatan Tanjunganom Nganjuk. *Jurnal Antivirus*, 65-80.
- Sugiyono. (2018). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Bandung: Alfabeta.
- Widodo, R. B. (2019). Peningkatan Efisiensi Kerja Guru Melalui Pembuatan Aplikasi Raport

Berbasis Komputer. *Jurnal
Pemberdayaan Masyarakat*), 363-370.