Google Sites-Based Teacher Administration in Elementary Schools

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A B S T R A K

Masih banyak guru yang kesulitan dalam merencanakan kegiatan pembelajaran dengan matang. Mayoritas guru tidak menyelesaikan buku administrasi karena harus dikerjakan secara manual. Maka dari itu, penelitian ini bertujuan untuk mengembangkan administrasi guru berbasis google sites di sekolah dasar. Jenis penelitian ini yaitu penelitian pengembangan dengan menggunakan model Rowntree untuk menghasilkan dan menguji produk. Sedangkan pada tahap evaluasi materi digunakan evaluasi formatif tessmer. Penelitian ini melibatkan ahli materi, ahli bahasa, ahli desain, dan ahli praktisi. Subjek penelitian ini adalah guru kelas dan bidang studi yang ada pada Sekolah Dasar dengan jumlah 21 orang. Pengumpulan data dilakukan observasi, wawancara, dokumentasi, dan tes. Instrumen yang digunakan untuk mengumpulkan data yaitu lembar kuesioner. Data dianalisis dengan analisis deskriptif kualitatif, kuantitatif, dan N-gain. Hasil uji kepraktisan pada tahap uji one to one diperoleh rerata sebesar 90,83% dan uji small group diperoleh rerata 92,75% (sangat praktis). Hasil uji efektifitas terhadap hasil prestest dan postest dengan nilai rerata N-gain sebesar 0,74, kategori tinggi. Dapat disimpulkan bahwa, administrasi guru dengan inovasi google sites di sekolah dasar sangat valid dan praktis untuk dimanfaat oleh guru. Penelitian ini berimplikasi pada pengembangan administrasi guru berbasis google sites yang kedepannya dapat meningkatkan kinerja guru.

A B S T R A K

There are still many teachers who have difficulty planning learning activities carefully. The majority of teachers do not complete the administration book because it has to be done manually. Therefore, this research aims to develop Google Sites-based teacher administration in elementary schools. This type of research is development research using the Rowntree model to produce and test products. Meanwhile, at the material evaluation stage, tessmer formative evaluation is used. This research involved material experts, language experts, design experts and practitioner experts. The subjects of this research were class and study teachers in elementary schools with a total of 21 people. Data collection was carried out by observation, interviews, documentation and tests. The instrument used to collect data was a questionnaire sheet. Data were analyzed using qualitative, quantitative and N-gain descriptive analysis. The results of the practicality test at the one to one test stage obtained an average of 90.83% and the small group test obtained an average of 92.75% (very practical). The results of the effectiveness test on the pretest and posttest results with an average N-gain value of 0.74, high category. It can be concluded that teacher administration with Google Sites innovation in elementary schools is very valid and practical for teachers to use. This research has implications for the development of Google Sites-based teacher administration which in the future can improve teacher performance.

1. INTRODUCTION

Education can create quality humans (Gunawan et al., 2020; Sudarmawan et al., 2020). Teachers play an important role in the educational process. Teachers must have professional competence so they can provide learning for students (Supriyanto et al., 2020; Ally, 2019; Reyes et al. 2017). Teachers must be able to design learning activities well, starting from planning, implementing, and determining whether the

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learning process is successful or not (Aryana et al., 2022; Kholis, 2019; Dudung, 2018; Hartanti & Yuniarsih, 2018). A good teacher is someone who can be an example for his students by being wise, mature, steady and authoritative. This ability is related to a teacher's ability to understand in depth the material being taught (Maulana et al., 2023; Aryana et al., 2022; Sappaile, 2017). Professional teachers give their best efforts inside and outside the classroom. Teachers must be able to make thorough plans for each lesson and class, stick to work programs and assessment schedules, and take professional development courses to acquire new skills (Sitaasih, 2020; Yulyani et al., 2020; Yuslam et al., 2017). Professional development is an important part of a teacher's career (Anas et al., 2021; Hartanti & Yuniarsih, 2018). Apart from that, currently teachers are also required to be able to use technology in learning activities.

The implementation of learning should refer to the plan. Having a good learning plan will guide the implementation of learning so that it is directed towards the learning objectives (Suryani et al., 2022; Nahdi & Cahyaningsih, 2018; Wikanengsih et al., 2015). Likewise, the implementation of education, which is based on a plan that has been well prepared, can certainly provide good results. Teacher administration is an important point in achieving educational goals. Teacher administration is part of learning planning (Nurhayati, 2018; Bararah, 2017). Teacher administration that is complete and according to good planning can be said to be successful in developing educational planning (Nurjannah et al., 2020; Bararah, 2017; Arman, 2016). Currently teachers are required to be orderly in administration. This is intended so that teachers and students can understand the lessons being taught. A teacher or prospective teacher must recognize and be responsible for a set of behaviors or actions known as teacher administration. This administration will later be used for teacher completion during school accreditation and supervision carried out by the Education Office. However, the current problem is that teachers still have difficulty carrying out administration. Previous research findings also state that there are still many teachers who have difficulty planning learning activities carefully (Sufiati & Afifah, 2019; Fitri et al., 2017; Nadlir, 2016). Other research also states that, in fact, technology will help make teachers' work easier, but sometimes teachers still have difficulty using it (Syahid et al., 2022; Leyn, 2021; Pertiwi et al., 2021). Similar problems were also found at SDN 1 Muara Batun. Based on the results of the interviews, several problems were found, namely that the majority of teachers did not complete the teacher administration book that had been prepared by the school. The teacher's administration has been duplicated and bound in book form using existing formats. However, teacher administration is left unfilled. SDN 1 Muara Batun has enough laptop devices for all class teachers, but overall it is not sufficient for all teachers including subject teachers. Among the number of classroom instructors and subject specialists, instructors who can operate computers account for more than half of the existing teachers.

Based on these problems, one solution offered to help facilitate teacher administration is by developing Google Sites-based administration. The importance of teacher administration lies in its role in supporting and guiding educators, fostering a positive school culture, and encouraging student success (Hasriani, 2022; Suwandayani et al., 2021; Raynesa, 2019).The use of technology in educational activities is one of the many things besides teacher management that also influences or contributes to the achievement of educational goals (Premana et al., 2021; Huda, 2020). There are various advantages and benefits of using educational technology which is currently applied in the form of utilizing technical processes and products to develop communication and information (Salsabila & Agustian, 2021; Zam, 2021; Taufik, 2019; Budiman, 2017). To improve the quality, efficiency and effectiveness of education, especially teacher effectiveness at the elementary school level, appropriate and optimal utilization strategies must be established (Kurniawati & Koeswanti, 2021; Mutji & Suoth, 2021; Rusmiyati et al., 2019). Previous research findings state that educational governance as an effective use of resources can improve educational standards (Ikhsan & Hadi, 2018; Suryana, 2017).Other research also states that it is important to prepare teacher administration before learning activities as guidelines and instructions for carrying out learning activities, including when and how to complete them (Salmia & Yusri, 2021; Gultom, 2020). Other research also states that one way to implement flexible, easy-to-learn, and participatory teaching strategies is to use Google tools (Sihotang, 2019; Al-Maroof & Al-Emran, 2018; Soni et al., 2018).Therefore, Google Sites-based teacher administration in elementary schools can help teacher administration. However, unfortunately, no research or studies have been found regarding Google Sites-based teacher administration in elementary schools.

This research aims to develop Google Sites-based teacher administration in elementary schools. Google Sites innovation in the form of administration allows teachers to create web pages under their school domain. Plus, Google Sites is easy to update and feature-rich, and even the least web-savvy teacher can use it. It is hoped that the results of this research will make it easier for teachers to complete administrative tasks in order to obtain valid and practical teacher administration. Apart from that, it can also increase teacher effectiveness in carrying out the duties and responsibilities of teachers in elementary schools.

2. METHOD

This type of research is development research.The preparation of this research product is based on aspects of perception, material/content, language, and graphics obtained through needs analysis. The model in this research is Rowntree, which produces and tests products for developing teacher administration. Meanwhile, at the material evaluation stage, a formative evaluation is used. The Rowntree model contains three phases: the planning stage, the development stage, and the evaluation or assessment stage. At the planning stage, an analysis of teacher needs is carried out. At the needs analysis stage, a preliminary study and teacher interview findings were carried out. Second is the development stage, namely designing Google Sites-based teacher administration by transferring teacher administration formats that have been collected by creating a Google Sites link. In the third stage, namely evaluation, analysis is carried out to determine the validity and effectiveness of the learning media implemented.

This research involved material experts, language experts, design experts, and practitioner experts. Material experts are needed to test the suitability of the material and the accuracy of the content. Media experts can assess the suitability of the product that has been designed through the Google Sites application. Linguists will also evaluate whether the sentence is used correctly. Practitioner experts to gain practical perspective input. The subjects of this research were class and field teachers at elementary schools in Jejawi District, Ogan Komering Ilir Regency, with a total of 21 teachers. One-to-One Test: In this stage, prototype 1 was tested on three teachers who had different abilities in using computer technology. Prototype 1, which has been revised through the expert review and one-to-one stages, is then called prototype 2. Meanwhile, prototype 2 will be tested at the small group stage.

On test, small groups are used to carry out instructor administration practice tests consisting of 8 teachers as users who have carried out one-to-one tests. In the final activity, the small group was given a questionnaire to find out the teacher's response to the teacher administration product and the practicality of teacher administration based on the teacher's response. The results of the expert validation stage, one-to-one test, and small group test on 8 teachers can be used as revision material and become prototype 2.

Field test carried out on a larger number of potential users than small group tests and were carried out on product users for correction reasons in the formative assessment category. This field test was carried out with the aim of identifying Google Sites-based teacher administration products when used in actual conditions or circumstances. This stage is used and has been revised based on the results of the small group test. This stage focuses on teacher administration evaluation so that it can be used appropriately and successfully to improve teacher performance. This field test is a refinement of the results obtained from the previous stage.

Data collection in this research was carried out using observation, interviews, documentation, and tests. Observations were carried out at Muara Batun 1 Elementary School and carried out directly. The aim of the observation is to review the learning situation as well as the facilities and infrastructure available at the school. Interviews are used to find out things in depth from respondents. The first interview process was carried out during the initial research study conducted on teachers. The purpose of the interview is to find out the problems experienced by the community in the field related to administrative book assessment procedures.

The documentation method is implemented during each research process. This documentation is a secondary data source that strengthens research data to show its accuracy in research. Meanwhile, the test method was used to determine the achievement of learning planning objectives and the effectiveness of teacher administration website users in arranging class administration in elementary schools in Jejawi District. The instrument grid used to collect data is the questionnaire sheet. The questionnaire grid used in this research can be presented below Table 1, Table 2, and Table 3.

Table 1. The Material Expert Validation Questionnaire Grid

No	Assessment Aspects	Assessment Indicators
1.	Conformity of administration with the sequence of curriculum administration	Conformity of the material with the definition of teacher administration in elementary schools
		Suitability of the breadth of material with the type of teacher administration in elementary schools
		The relationship between teacher administration material and learning planning
2	Data accuracy (provided format)	Accuracy of material with learning planning
		Suitability of Google Sites material as a digital learning resource

No	Assessment Aspects	Assessment Indicators
3	Supporting materials	Learning support materials as an introduction to teacher administration
		The relationship between teacher administration material and teachers' daily work
		Interest in the material as a learning planning tool
		Teacher administration materials encourage orderly administration in schools
4	Sophistication of materials	Suitability of material with scientific developments.
		Actual pictures and illustrations.
		The flow of material in the product is clear and well understood.
		Teacher involvement as a supporter of the presentation
		Accuracy in the use of communicative, dialogical and interactive language rules.
		The teacher's ability to encourage critical thinking
		Compatibility with the development of computer information technology

Source : Suarthama (2016) with modifications

Table 2. The Language Expert Validation Questionnaire Grid

No	Assessment Aspects	Assessment Indicators	Question Number
1.	Grammar	Use spelling that is in accordance with EYD	1
		The language used is easy to understand	2
2.	Communicative	The sentences used are effective	3
		The teacher's understanding of the message conveyed	4
3	Suitability to the teacher's ability level	Suitability to the teacher's level of ability for technological advances	5
		Suitability to the teacher's level of ability in completing administration	6
4	Sentence Usage	Consistent use of terms and symbols	7
		Effectiveness of word selection so that multimedia is easily understood by teachers	8
		Accurate selection of font size and type	9
		Completeness and coherence between paragraphs	10

Source : Nugroho & Mawardi (2021) with modifications

Table 3. The Design Expert Validation Questionnaire Grid (Google Sites)

No	Assessment Aspects	Assessment Indicators	Question Number
1.	Multimedia Display	Color selection	1
		Selection of template/background	2
		Graphic Media can be seen clearly	3
		Icon selection	4
		Design display settings	5
		Creativity and innovation	6
2.	Technology Perspective	Media is easy to operate	7
		Simple and easy to access anywhere	8
3	Processing Capability	In accordance with the development of elementary school teachers' understanding of ICT	9
		Making administrative arrangements for elementary school teachers more effective	10

Source : Suarthama (2016) with modifications

The techniques used to analyze the data in this research are qualitative descriptive analysis, quantitative descriptive analysis, and N-gain. Qualitative descriptive analysis is used to analyze data in the form of input provided by experts regarding teacher administration based on Google sites. Quantitative descriptive analysis is used for analyzing data in the form of scores given by experts regarding teacher administration based on Google sites. Meanwhile, the N-gain test is used to analyze the effectiveness of teacher administration based on Google sites.

3. RESULT AND DISCUSSION

Results

This research was carried out in three stages, namely, the planning, development, and evaluation stages. The planning stage produces a needs analysis and goal-setting procedures. The planning stage to be achieved is to produce valid and practical teacher administration. The first activity carried out at this stage was conducting interviews with several teachers. This aims to obtain information about the completeness of teacher administration that they have made manually and to ask what obstacles they have felt when making teacher administration manually. In the first stage, activities were also carried out to analyze teacher characteristics through the field of technology. Preliminary study findings and teacher interview findings provide evidence that teachers need teacher administration that is easy, practical, and can help them so that the teacher administration assessment process that will be supervised by the principal and school supervisor can be completed quickly and accurately. Therefore, holding innovation by designing teacher administration formats that can be accessed by teachers via Google Sites services is the right thing. Schools with adequate infrastructure and facilities also help in this regard. At the development stage, activities were carried out to design teacher administration based on Google sites. The activity is carried out by transferring the teacher administration formats that have been created in word form into documents that will be worked on by the teacher by accessing the Google Sites link. There are two stages in the development phase, namely paper-based and computer-based. Meanwhile, the evaluation stage consists of Self Evaluation, Expert Review, One-to-one Test, Small Group Test and Field Test. First, Self Evaluation.

The activity carried out at the self-evaluation stage is assessing the draft created. At this stage, website revisions are carried out to minimize author errors. The results of the self-evaluation were used as a basis for making improvements, namely by revising the appearance of the homepage, the result of which became prototype 1. Next, expert review (expert validation) of Prototype 1 of the teacher administration website being developed was assessed by three experts, namely material experts, language experts, and design expert. The data generated from the three expert validators consists of quantitative data in the form of suggestions and comments which are used as a basis for improving the prototype. In addition, quantitative data obtained from the validator assessment results using a Likert scale is used as a basis for determining the level of validity of the teacher administration website being developed. The results of the development in this research can be presented in Figure 1.
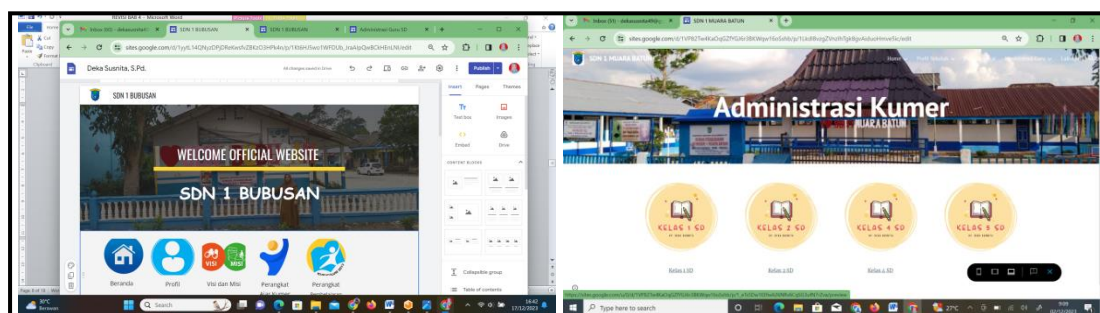
Figure 1. The Development Results Google Sites-Based Teacher Administration

The expert review stage is carried out by validating the Google Sites-based teacher administration website by language expert validators, material experts and design experts according to their competency or expertise background. The results of the analysis of assessment data provided by material experts are that the total number of indicators presented by material experts is 16 with an assessment scale of 1,2,3,4,5. The sum of the scale values is 70, the average is 4.38 and the percentage is 87.50% so the category is very valid. The results of the analysis of assessment data provided by linguist experts are that the total number of indicators presented by linguist experts is 10 with a rating scale of 1,2,3,4,5. Meanwhile, the sum of the scale values is 46, the average is 4.60 and the percentage is 92.00%, so the category is very valid. The results of the analysis of assessment data provided by learning design experts are that the total number of indicators presented by language experts is 10 with an assessment scale of 1,2,3,4,5. The sum of the scale values is 48, the average is 4.80 and the percentage is 96.00%, so the category is very valid. A recapitulation of the expert review results in this research can be presented at Table 4.

Based on the results of the expert review recapitulation, it is known that Google Sites-based teacher administration is categorized as appropriate from the aspects of material, language and design. One-on-one evaluation activities or one to one evaluation of teacher administration website products have also been revised based on suggestions from expert reviews. This trial involved three teachers in Jejawi District in

one to one groups. This stage was carried out to test the practicality of elementary school teacher administration that was developed and represented the population. The results of the one-to-one test and expert review were used as a reference for creating prototype 2. The results of the one-to-one test are presented in Table 5.

Table 4. The Recapitulation of Expert Review Results

No	Validation	Percentage	Information
1	Material	87.50%	Very valid
2	Media Design	96.00%	Very valid
3	Language	92.00%	Very Valid
	Average	**94.00 %**	**Very valid**

Table 5. The Recapitulation of One-to-One Test Results

No	Name	Scale	Percentage	Category
1	DE	3.11	77.78%	Very practical
2	BK	3.89	97.22%	Very practical
3	YL	3.90	97.50%	Very practical
	Average	**3.63**	**90.83%**	**Very practical**

Based on the results of this trial, it can be concluded that the Google Sites-based teacher administration developed is practical. Prototype 2 was produced from the results of revised evaluation input from experts and three teachers. Next, a trial was carried out on a small group. The teachers who provided assessments in this small group evaluation consisted of 8 teachers with different abilities from the previous stage. This stage was carried out to test the practicality of prototype 2 from the teacher's perspective and used an instrument whose assessment aspects were the same as the one to one test. The recapitulation results of the small group test results are presented in Table 6.

Table 6. The Recapitulation of Small Group Test Results

No	Name	Scale	Percentage	Category
1	LA	4.00	100%	Very practical
2	NT	4.00	100%	Very practical
3	WA	3.90	97.5 %	Very practical
4	YS	3.80	95 %	Very practical
5	AL	3.20	80 %	Very practical
6	KA	3.10	77.5 %	Very practical
7	BC	3.80	95 %	Very practical
8	MZ	3.90	97.5 %	Very practical
	Average	**3.71**	**92.75 %**	**Very practical**

Based on the results of the small group evaluation above, it can be concluded that the use of Google Sites-based teacher administration is very practical. Field tests were carried out on prototype 3 (finished product) of the Google Sites-based teacher administration product which was developed and revised based on small group input. This field test stage aims to prove the effectiveness of Google Sites-based teacher administration developed through performance tests. At this stage, a user (teacher) performance test is carried out, the results of the performance test are provided through a pretest and posttest design, so that it can show the user's (teacher) performance. The pretest results showed an average of 1.53 while the posttest results showed an average of 3.16. The difference in pre-test and post-test scores shows an increase in scores after the teacher uses the website and the gain score can be seen. Teacher learning outcomes at the field test stage can be seen in Table 7.

Table 7. The Recapitulation of Field Test Stage Results

	Amount	Average	Gains	N-gain	Category
Pre Test	405	1.53		0.74	Tall
Post Test	796	3.16			

The N-gain obtained for the field test stage was 0.74. The gain category shows N-gain in the range ≥ 0.7 in the high category. Thus, it is known that the Google Sites-based teacher administration product

developed is effective in improving the performance of elementary school teachers in Jejawi District, Ogan Komering Ilir Regency.

Discussion

The results of data analysis show that Google Sites-based teacher administration in elementary schools received very valid and practical qualifications provided by experts and teachers. This indicates that the Google Sites-based teacher administration developed is suitable for use in learning. This feasibility is caused by several factors, namely first, Google Sites-based teacher administration is suitable to use because it can improve teacher performance. Google Sites has a feature that allows users to work with spreadsheets. With this feature, users can import and export data in various formats such as .xls, .csv, .txt, and .ods. This is in line with previous research which states that Google Sites has the ability when used as a spreadsheet, so that users can import and export data in .xls,.csv,.txt, and.ods formats (Afrianto et al., 2022; Aminah et al., 2021).

Additionally, users can also export to .pdf and html, easily edit documents, embed spreadsheets in web pages, and engage in collaborative editing (Afrianto et al., 2022; Abivian, 2021). All documents can be accessed by Google Sites in one link, making it practical for teachers to work (Shobri & Rifqi, 2023; Suprayogi et al., 2023). Google Sites services will help teachers be more effective compared to working on documents manually which takes longer. By using Google Sites, teachers can complete the required teacher administration book more quickly and easily download the data provided (Shobri & Rifqi, 2023; Afrianto et al., 2022). Apart from that, Google Sites also has a function that allows teachers to review previous data contents.

Second, Google Sites-based teacher administration is suitable to make it easier for teachers to teach. Technological advances make completing tasks easier. This is in line with previous research which states that advances in technology make completing tasks quite simple (Davidi et al., 2021; Gilakjani, 2017; Blanchard et al., 2016). To help learning activities, many people have developed learning media applications (Razak et al., 2018; Chien, 2017). The complexity and influence on the successful integration of educational technology into teaching and learning activities include teacher openness to technology, teacher attitudes, knowledge and abilities (Sondakh et al., 2021; Chien, 2017; Gilakjani, 2017; Blanchard et al., 2016). Therefore, it is very important to use technology in improving teacher skills. This research can help teachers organize important learning data.

Third, Google Sites-based teacher administration is worth using because it is very practical. Google sites has a number of benefits, such as easy to use, free of charge (free), protects data from hard drive failure, uses a simple WYSIWYG (What You See Is What You Get) editor, provides extensive support and documentation, can format documents, and check spelling . Apart from that, the website is equipped with school data so that the general public can also access and find out about the school's advantages, so that it can increase the number of PPDB. Data that has been downloaded on the teacher's device or laptop can be used offline or edited offline according to each teacher's wishes. This is what makes Google Sites-based teacher administration very practical to use.

Previous research findings also show that using Google Sites is very useful for learning (Maskar et al., 2021; Kwan, & Lai, 2019). Other research findings also state that Google Sites is an innovation that can be used in learning (Afrianto et al., 2022; Sanjaya, 2021; Harsanto, 2017;). Google sites-based teacher administration can improve teacher performance by providing a platform for better organization, communication and collaboration. Google Sites allows teachers to create a simple and consistent way for students and teachers to access information, both in class and at home (Davidi et al., 2021; Gilakjani, 2017; Blanchard et al., 2016).

The innovation of Google Sites for teacher administration development allows teachers to create visually appealing and functional websites without requiring extensive technical skills. The advantage of Google Sites being developed is that it is easy to use and can be adapted to the needs of each teacher and class. This research has implications for improving teacher performance by providing a platform for better organization, communication and collaboration. This ultimately leads to a more effective teaching and learning experience for both teachers and students. The limitation of this research is that the administration download process requires an internet quota, so those who are constrained by costs cannot access it. Future research is recommended to explore alternative administrative download methods that are more efficient and affordable for all users.

4. CONCLUSION

The results of the data analysis show that the development of Google Sites-based teacher administration in elementary schools has received very valid and practical qualifications from experts and

teachers. The n-gain test results also show that the Google Sites-based teacher administration product developed is effective in improving the performance of elementary school teachers in Jejawi District, Ogan Komering Ilir Regency. Google Sites-based teacher administration is worth using because it makes things easier for teachers and its use is very practical. Thus, it can be concluded that the Google Sites innovation for teacher administration is very feasible and effective to use.

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