



## Journal of Education and Learning Mathematics Research (JELMaR)

Online ISSN : 2715-9787

Print ISSN : 2715-8535

Journal Homepage : <http://jelmar.wisnuwardhana.ac.id/index.php/jelmar/index>

---

### Online Learning Management Using Google Sites on Relations and Functions in Pandemic Conditions

Robiul Khasanah & Siti Miftahul Muflihah

**To cite this article:** Khasanah, R., & Muflihah, S. (2021). Online Learning Management Using Google Sites on Relations and Functions in Pandemic Conditions. *Journal of Education and Learning Mathematics Research (JELMaR)*, 2(1), 68-76.  
<https://doi.org/10.37303/jelmar.v2i1.49>

**To link this article :** <https://doi.org/10.37303/jelmar.v2i1.49>



#### **Publisher**

Department of Mathematics Education,  
Faculty of Teacher Training and Education,  
Universitas Wisnuwardhana Malang

## Online Learning Management Using Google Sites on Relations and Functions in Pandemic Conditions

<sup>1</sup>Robiul Khasanah, <sup>2</sup>Siti Miftahul Mufliah

<sup>1</sup>Mathematic Teacher of SMK Muhammadiyah 3 Singosari, <sup>2</sup>Mathematic Teacher SMP Muhammadiyah 4 Singosari  
E-mail: ana.robiul65@gmail.com

**Abstract:** *The purpose of this study aims to describe learning management using google sites on relation and functions in pandemic at SMP Muhammadiyah 4 Singosari. This research uses descriptive qualitative research methods. The data collection methods used in this study were interview, observation and documentations during the learning process. The subject of this study were students of class VIII SMP Muhammadiyah 4 Singosari. online learning learning management during pandemic conditions which includes planning, organizing, implementing, and monitoring. Online learning will be carried out with the help of google sites as a medium for delivering material. The planning stage includes observation, preparation of lesson plans, collection of material sources and preparation of learning media using google sites. The organizing stage includes determining the communication channels used for the online learning process and focusing resources towards the target. The implementation stage is the interaction carried out by teachers and students during learning. The supervision stage includes the evaluation stage in learning. Learning evaluation is carried out through student attendance and student activeness in participating in learning. student attendance recap shows an increase in each meeting. The use of google sites as a learning medium during the pandemic can be further developed to increase student motivation and make it easier for students to learn while carrying out online learning*

*Keyword: learning management, google sites, online learning*

### INTRODUCTION

COVID 19 is an infectious disease caused by the corona virus (WHO, 2020). The spread of COVID 19 in Indonesia was detected in March 2020 after President Joko Widodo announced two positive corona patients. The central government is working to prevent the spread of COVID 19 to reduce the number of infected victims. The existence of a social distancing policy issued by the government prevents most schools from imposing face-to-face learning, this is done as a response to circular number 4 of 2020 issued by the Minister of Education and Culture regarding the implementation of educational policies in the emergency period of the spread of COVID 19. Covid 19 has an impact on the world of education, learning is carried out online due to the policy of maintaining distance (Ratten, 2020). One of the methods used to keep learning going in the pandemic era is by utilizing e-learning.

The use of technology and information is very influential in the implementation of online or online learning. The era of globalization has made technological developments increase. Online learning with easy access is needed in learning during the pandemic (Carter, 2020). Changes in learning that were originally carried out through direct or face-to-face learning to online-based learning affect the learning management that has been

planned. Even though learning is carried out online, teachers are required to be able to deliver learning material contained in the educational curriculum. This is a challenge for teachers to develop learning media that can be used during the pandemic. E-learning can be a reference that can be used in the learning process.

Learning management is a system prepared for students and students and teachers and lecturers to carry out learning using software (Nafiah & Hartatik, 2020). Manullang (2014) defines learning management as a learning planning arrangement that includes planning for organization, implementation and supervision. Success in implementing learning can be seen from good learning management. Every student has a different learning style. Therefore, student learning styles need to be considered in making distance learning media (Zapalska, 2006). From some of these opinions it can be interpreted that learning management is a series of activities carried out to manage the teaching and learning process which contains planning, organizing, implementing and monitoring.

Teachers have an important role in improving the quality of education, a teacher must master learning management, because learning management includes plans that have been made before learning is carried out. The teacher acts as a manager in the learning process, therefore Manullang (2014) mentions several roles of teachers as managers in the learning process, including: (1) Planning, namely activities carried out by the teacher to formulate learning objectives. Planning is used to direct learning so that it can be carried out effectively, efficiently and to facilitate the supervisory process. (2) Organizing, namely dividing and coordinating activities in the learning process to achieve predetermined goals. (3) Leading, a teacher is tasked as a leader in the learning process, the teacher must be able to motivate students to be ready to implement and receive the learning material being taught. (4) Supervising, including teacher activities in evaluating learning, measuring student learning outcomes and determining whether the functions of the organization and their leaders have carried out their duties properly so that they can achieve predetermined goals.

Online learning is widely known to the public with online learning. According to Pohan (2020) online learning is a learning activity that takes place using a network, in this case teachers and students do not face to face directly. Online learning has begun to be widely recognized by the general public starting in 2020 due to global problems, namely the transmission of the plague caused by the COVID 19 virus which requires everyone to keep their distance. Many problems arise from online learning. This problem is faced by teachers as teachers, students as students and parents. One of the problems faced by teachers is that not all teachers are able to use technology properly. Teachers who tend to always carry out conventional learning activities will find it difficult to carry out technology-assisted learning. The problems faced by students are in the form of financial, media and psychological problems. Not all students have smartphones or laptops that are used as online learning media besides that the unstable internet network conditions can affect the ongoing learning process. Pohan (2020) reveals the psychological problems faced by students during online learning, namely students experience pressure due to assignments given by the teacher, students also do not understand the material presented.

Online-based learning facilities are available in various types of applications. The Ministry of Education developed a learning house application as a reference for online learning media. In addition, applications such as google classrooms, teacher rooms, schoology edmodo, quizizz, and learning web are quite often used by teachers as a medium for learning. The use of applications in online learning is a new innovation as well as a challenge for teachers in preparing material to be used in the online learning process (Wiryanto, 2020).

Google sites is one of the products provided by Google to create a site for free (Kurniawan & Sanjaya, 2010). Google sites have several advantages, namely free, easy to

create, can collaborate with other authors to create and edit site content, as well as sites that have been made easy to find using the google search system. Some of these advantages can be considered in creating learning media using google sites. Online learning management using google sites can be an intermediary for effective and efficient learning activities during a pandemic.

Relations and functions are mathematical material taught at the VIII grade SMP / MTs level in semester one. In the 2013 curriculum, the material on relations and functions contains two basic competencies, namely KD 3.3 Describing and expressing relations and functions using various representations (words, tables, graphs, diagrams and equations), KD 4.3 Solving problems related to relations and functions using various kinds of representations. This material consists of 4 sub-chapters of the material to be studied, namely: (1) Understanding the form of presentation of the relationship, (2) Understanding the features of the function, (3) Understanding the form of the presentation of functions, (4) One-to-one correspondence.

Research conducted by Nafiah & Hartatik (2020) regarding the application of online-based learning management using the google classroom application to improve students' ability to make learning, resulted in an increase in the average student rate for each cycle carried out. Listyani (2012) conducted a study entitled management of Islamic religious education at SMP Nasima Semarang by using 3 stages, namely planning, implementation, and assessment.

Through the google sites media the teacher can add learning materials in the form of pictures, videos, and assessment questions easily and attractively designed. This research was conducted to find out how the online learning design uses google sites as an alternative media that teachers can use in the teaching and learning process in the midst of a pandemic. This study also shows how students respond during learning amid the pandemic.

## **METHOD**

The type of research used is qualitative research. This method is used to describe the management of online learning learning during pandemic conditions which includes planning, organizing, implementing, and monitoring. Online learning that will be carried out with the help of google sites as a medium in delivering material.

The subjects of this study were teachers and grade VIII students of SMP Muhammadiyah 4 Singosari who were taking the material relations and functions. Data collection methods used in this study were interviews, observation and documentation during the learning process.

## **RESULT AND DISCUSSION**

Teachers have an important role in processing learning and increasing the effectiveness of the learning process. Saifullah and Darwis (2020) argue that during the Covid-19 pandemic, learning management has a very important position in increasing the effectiveness of the teaching and learning process, this is because learning activities are required to continue to provide excellent service and still comply with health protocols set by the government. The use of media is very important in online learning. In line with this, Nafiah & Hartatik (2020) use google classroom as a medium for implementing learning management, from the results of the application of learning media using the google classroom application, it is proven to be effective in improving student abilities. This study will explain the 4 stages in online learning management using google sites on relations and functions in pandemic conditions. These stages include:

### **a. Planning**

Planning is an activity to prepare something that will be carried out to achieve predetermined goals (Rayuni, 2010). The planning stage includes (1) observation of mathematics learning activities carried out online. (2) Selection of materials and preparation of one sheet of online RPP (3) Collection of material sources related to the

material that has been selected (4) Compilation of online learning media using google sites on the material relations and functions in accordance with the RPP. Observations were made during the mathematics learning process. From the observation activities the teacher uses have used various variations of media in learning. The learning media most often used by teachers is through the WhatsApp group. After the observation stage is carried out, then the material selection is carried out. The material chosen is the relation and function reasons for choosing this material because the material relations and functions are material that will be studied by students. After selecting the material, the researcher formulates indicators of competency achievement and prepares RPP according to the media to be used. Basic competencies and indicators of competency achievement are presented in the following table:

**Table 1. Basic Competencies and Indicators of Competency Achievement**

Basic Competencies	Indicators of Competency Achievement
3.3. Describe and express relations and functions using various representations (words, tables, graphs, diagrams, and equations)	3.3.1. Define a relation 3.3.2. Shows a relation with an arrow diagram, a Cartesian diagram, and a set of ordered pairs 3.3.3. Define a function 3.3.4. Shows a function with an ordered set of pairs, arrow charts, function / equation formulas, tables and graphs
4.3. Solve problems related to relations and functions by using various representations	4.2.1. Solve problems related to relations and functions

Researchers also collected various sources related to the material relations and functions and then began to plan the appearance of the google sites. The material that has been compiled will then be presented in the form of a poster display to make it easier for students to understand the material relations and functions. This poster can be downloaded by students so that students can attach the poster to their notebooks. A poster display regarding relations and functions is presented in Figure 1.

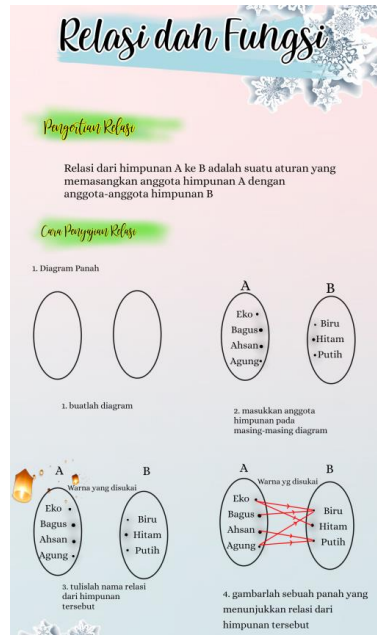


Figure 1. Poster of Relation

After making the posters, the next step is to compile the online media google sites. In addition to the material presented in the form of posters, the online media google sites is also equipped with videos and a column of questions that can be filled in by students if there is still material that is not understood. The appearance of online learning media with google sites which is named online-mathematics is presented in the following image:

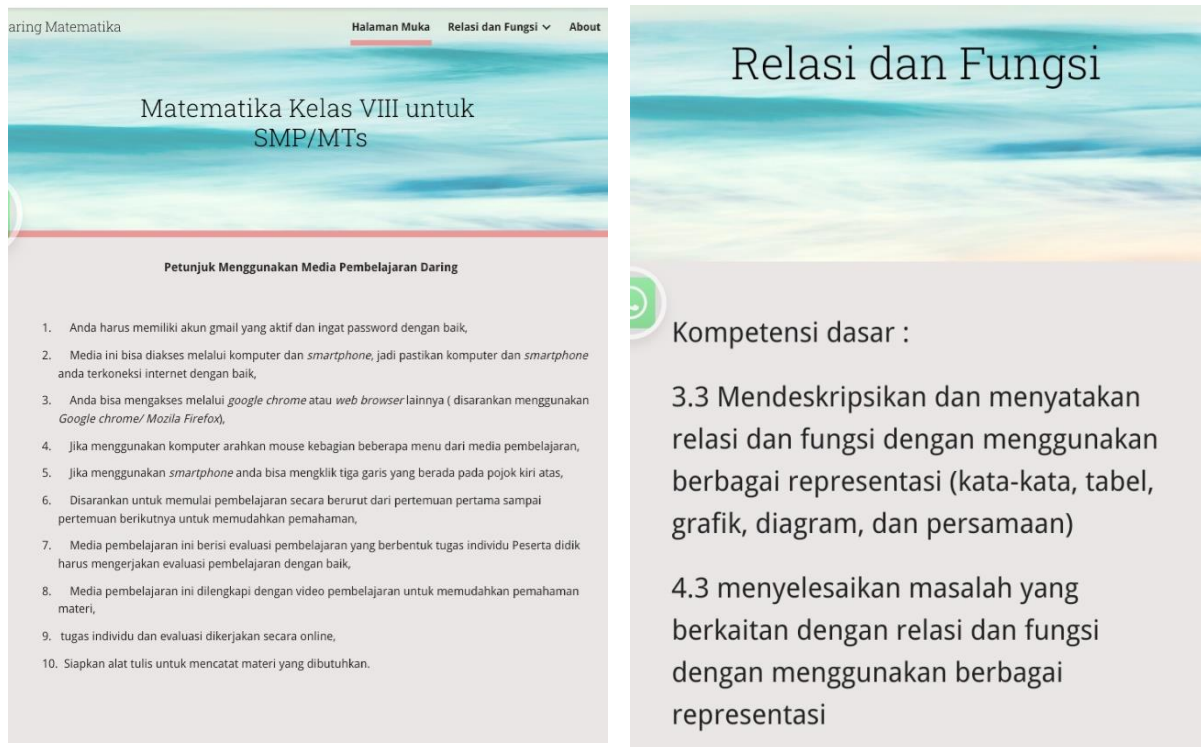


Figure 2. a Mathematical Online Page View

The results of the design of the lesson plans and online media will then be applied to learning activities. The purpose of creating the google sites website is to help provide a variety of learning media that can be used by teachers and students during home learning activities. Research conducted by Lestari & Suryani (2019) proves that students' motivation and interest in learning can be increased by using a variety of learning media. The variety of learning media makes students not easily bored and eager to learn and learn how the media is being used.

b. Organizing

According to Manullang (2014) organizing is the process of dividing work into components that can be handled and activities that coordinate the results to be achieved. The characteristic of quality learning is a learning process that is charming, interesting, not boring, varied, creative and beautiful (Rayuni, 2010). Activities in organizing include determining the communication channels used for the online learning process and focusing resources on targets. The communication channel used in the online learning process in addition to using the WhatsApp group is by utilizing the comments column that has been provided by the teacher on google sites. Utilizing the internet network, the material presented through posters, and accompanied by discussion videos is expected to help students understand mathematics material and achieve predetermined learning objectives.

c. Implementation

The implementation stage is the process of taking mathematics learning online. The implementation stage is the stage of interaction between teachers and students. The interaction between the teacher and the student is done online using the comments column provided by the teacher on the google sites page. In accordance with the lesson plans that have been made in the early stages of the implementation of learning, it starts by inviting students to pray before learning begins, asking about students' conditions, making absences that will be filled in manually by students, conveying learning objectives, and conveying an outline of the topic of the material to be studied.

After students have made attendance and are ready to carry out the learning process, students are asked to open the website from google sites, the teacher will send a website link through the class group and students only need to click on the link. The core activities in the learning process contain five activities, namely observing, asking, exploring, associating, and communicating. At the initial stage of the core activities students are asked to read and understand the posters available on the mathematics online page. The teacher then provides stimulation to students so that students are motivated to have a discussion about the material being studied. The teacher gives questions related to the material being studied and then other questions submitted by the students are related to the difficulties faced in learning material relations and functions. Questions and answers are conducted through the student comments feature available on the google sites website.

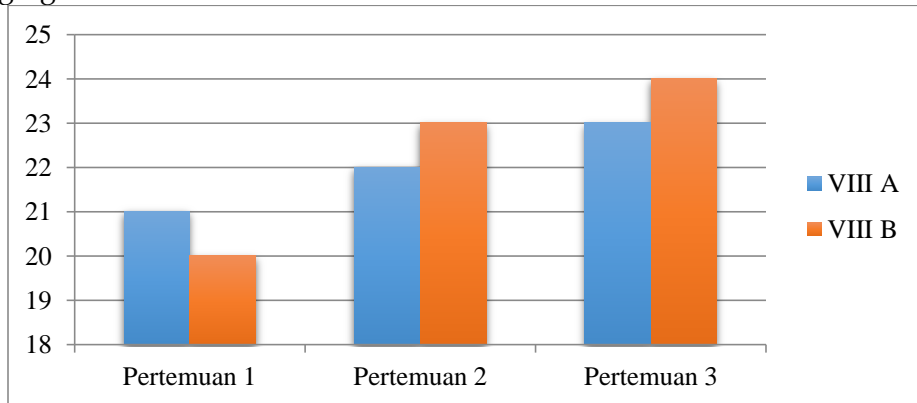
Then students collect data and information related to material relations and functions. Through various references. The data and information obtained by the students were then analyzed before being communicated through the student comment column. before learning ends, the teacher invites students to conclude learning outcomes and assigns assignments to students via google form. At the implementation stage the teacher is also required to provide indirect reinforcement to students. this can arouse activity from students.

The problem faced when doing online learning using google sites was that students tended to be less active in discussions. Therefore, the teacher's questioning ability must be used when learning with networks. In addition, students use more whatsapp groups for discussion activities. In order for learning to be carried out effectively and

efficiently, it was decided to use the WhatsApp group as a medium for conducting discussions.

d. Supervision

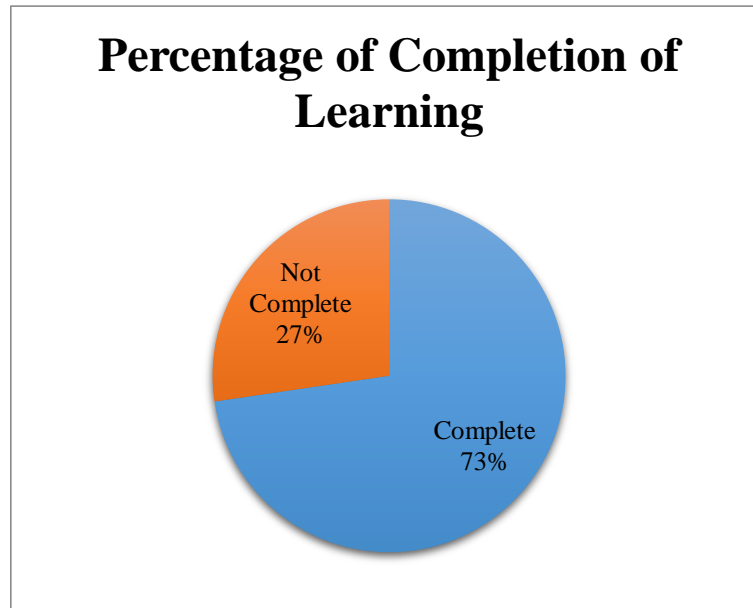
Manullang (2014) defines that supervision in learning management is an activity of evaluating learning, measuring student learning outcomes, and determining whether the functions and leaders have carried out the task in accordance with the objectives. In addition to planning learning, the task of a teacher is to evaluate both learning outcomes and learning evaluations. In online learning, learning evaluation is carried out through student attendance and student activeness in participating in learning. A recap of student attendance in online learning using google sites is presented in the following figure:



**Figure 3. Student Attendance at Each Meeting**

At the beginning of the meeting, the total number of 48 students who attended online learning was 21 (43.75%) students from class VIII A and 20 (41.76%) students from class VIII B. learning. The result of the second attendance recap was an increase in students who took part in the learning process using google sites. From a total of 48 students, 22 (45.83%) students from class VIII A and 23 (47.92%) students from class VIII B were present in online learning. google sites. The results of the attendance recap at the third meeting conducted by the teacher showed an increase in class VIII B. A total of 22 (45.83%) from class A participated in the learning process, the number of students who attended the third meeting showed the same number as the previous meeting. while for class VIII B as many as 24 (50.00%) students attended the online learning process. Based on observations, from the number of students who attended, most of the students had started to be active in participating in discussions and questions and answers conducted by the teacher. To increase student motivation during the pandemic, it is necessary to use a variety of learning media to reduce boredom in students in online learning activities. Evaluation of learning outcomes is obtained from the value of the assignments given at each meeting. The student assignment scores will then be added up and made averaged and analyzed whether they have reached the minimum completeness criteria set by the school, namely 75. The percentage of student learning outcomes has exceeded the KKM is shown in the following figure:





**Figure 4. Percentage of Completion of Learning**

Based on the figure, it is known that approximately 73% of the 48 students have said it is complete and 27% of the 48 still do not meet the completeness criteria. The percentage of completeness shows that the effectiveness of the use of learning media using google sites is in the effective category.

## CONCLUSION

The existence of a policy of learning from home makes learning that was originally carried out in a conventional way has now turned into online learning, namely learning by utilizing the internet network. Various kinds of media can be used in online learning, one of which is by using google sites. Online learning is nothing new in the world of education. In order to be carried out in accordance with the learning objectives, a learning management is needed that will be used by the teacher to carry out the teaching process to students. Learning management includes planning, organizing, implementing, and monitoring.

Learning management in online learning using google sites starts from the planning stage. The planning stage includes observation of online learning activities, material selection, preparation of lesson plans in accordance with school regulations, collection of material sources related to the selected material and preparation of online learning media using google sites. The second stage in online learning management using google sites is organization. This stage includes determining the communication channels that will be used during the learning process and determining the resources that will be used to help students achieve learning goals. The third stage in online learning management using google sites, namely implementation, the implementation stage includes preliminary activities, core activities, and closing activities. The core activity contains five processes, namely observing, questioning, exploring, associating and communicating. Implementation activities refer to the RPP that has been made at the planning stage. The last stage in online learning management using google sites is the supervision stage. The supervision stage includes a recap of student attendance at each meeting and student learning outcomes. The surveillance stage is carried out to determine the effectiveness of online learning with the help of google sites during the pandemic. Learning management is used to improve the quality of education. Online learning management using google sites results in an increase in student attendance at each meeting, and students tend to be more active in discussions with teachers. Online learning management using Google sites can be

a reference for online learning during a pandemic to increase the effectiveness of the learning process.

#### ACKNOWLEDGMENT

Researchers would like to thank the various parties who were directly or indirectly involved in the process of making this article, the researchers would like to thank:

1. Mr. Toyib, S.Pd, as the Principal of SMP Muhammadiyah 4 Singosari who has granted permission to conduct research at SMP Muhammadiyah 4 Singosari.
2. Mrs. Siti Miftakhul Muflihah, M.Pd as a Mathematics teacher who teaches at SMP Muhammadiyah 4 Singosari who has provided guidance during the implementation of PPL.
3. Mrs. Febi Dwi Widayanti, M.Pd as the PPL supervisor who has provided direction and guidance during the PPL implementation and article preparation.
4. The writer's family who always provides support and prayers.
5. Friends of the 2017 class of mathematics education study program who are always together and provide support.

#### REFERENCES

- Manullang, Martua. (2014). Manajemen Pembelajaran Matematika. *Jurnal Pendidikan dan Pembelajaran*, 21(2), 208-214.
- Carter Jr, R.A., Rice, M., Yang, S. and Jackson, H.A. (2020). Self-Regulated Learning in Online Learning Environments: Strategies for Remote Learning. *Information and Learning Sciences*, Vol. 121 No. 5/6, pp. 321-329. <https://doi.org/10.1108/ILS-04-2020-0114>
- Kurniawan, N., & Sanjaya, R. *Websites Praktis Dengan Google Sites*. Jakarta : Elex Media Computindo.
- Lestari, Nurindah & Suryani, D. R. (2019). Penggunaan Variasi Media Pembelajaran Untuk Meningkatkan Motivasi dan Minal Belajar Matematika Siswa Kelas XI IPS 3 SMA Negeri 2 Merauke. *Musamus Journal of Mathematic Education*, 1(2), 74-79.
- Listyani, Endang. (2012). Manajemen Pembelajaran Pendidikan Agama Islam di SMP Nasima Semarang. *Education Management*, 1(1), 46-53
- Nafiah, & Hartatik, S. (2020). Penerapan Manajemen Pembelajaran Berbasis Daring Dengan Menggunakan Google Classroom Untuk Meningkatkan Kemampuan Mahasiswa Dalam Membuat Perangkat Pembelajaran. *Education and Human Development Journal*. 5(1). 9-22
- Pohan, Albert Efendi. (2020). *Konsep Pembelajaran Daring Berbasis Pendekatan Ilmiah*. Grobogan: CV. Sarnu Untung
- Ratten, V. (2020). Coronavirus (Covid-19) and the Entrepreneurship Education Community. *Journal of Enterprising Communities: People and Places in the Global Economy*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JEC-06-2020-0121>
- Rayuni, Dewi. (2010). Manajemen Pembelajaran di Madrasah Aliyah Negeri (MAN) 3 Palembang. *TA'DIB*, 15(1), 69-104
- WHO. (2020). *Coronavirus*. [https://www.who.int/health-topics/coronavirus#tab\\_1](https://www.who.int/health-topics/coronavirus#tab_1) diakses tanggal 3 Oktober 2020
- Wiryanto. (2020). Proses Pembelajaran Matematika di Sekolah Dasar ditengah Pandemi Covid-19. *Jurnal Review Pendidikan Dasar: Jurnal Kajian Pendidikan dan Hasil Penelitian*. 6(2),
- Zapalska, A. and Brozik, D. (2006). Learning Styles and Online Education. *Campus-Wide Information Systems*, Vol. 23 No. 5, pp. 325-335. <https://doi.org/10.1108/10650740610714080>