Jurnal Ilmiah Sekolah Dasar
Volume 4, Number 4, 2020 pp. 581-588
P-ISSN: 2579-3276 E-ISSN : 2549-6174
Open Access: ttps://ejournal.undiksha.ac.id/index.php/JISD/index

Quantum Learning Model Assisted with Video Have an Effect on Science Learning Outcomes

*** Made Era Kusmayani[1], I Ketut Dibia[2], Adr. I. Wyn. Ilia Yuda Sukmana[3]**

[12] *Program Studi Pendidikan Guru Sekolah Dasar. Universitas Pendidikan Ganesha, Indonesia*

ARTICLEINFO

Article history:
25 December 2019
Received in revised form
01 January 2020
Accepted 25 January 2020
Available online 03
November 2020

Kata Kunci:
Hasil belajar, quantum, video

Keywords:
Learning outcomes, quantum, video.

ABSTRAK

Model pembelajaran yang diterapkan cendrung masih berpusat pada guru (*teacher centerd)* sehingga penelitian ini bertujuan untuk mengetahui implementasi model pembelajaran *quantum* berbantuan media video terhadap hasil belajar IPA siswa kelas IV SD. Jenis penelitian ini yaitu Eksperimen semu dengan desain penelitian *Non-equivalent Post-Test Control Group Design.* Populasi pada penelitian ini yang berjumlah 133 siswa. Pengambilan sampel diambil dengan cara *random sampling*. Dari hasil pengundian ditetapkan kelompok eksperimen berjumlah 24 orang dan kelompok kontrol berjumlah 23 orang. Metode yang digunakan dalam pengumpulan data adalah tes objektif. Analisis data melalui tahap analisis statistik deskriptif dan inferensial. Berdasarkan hasil perhitungan uji-t menunjukkan (t = 5,54 sig = 0,00). Hal ini menunjukkan bahwa terdapat perbedaan hasil belajar IPA antara kelompok siswa yang dibelajarkan dengan model pembelajaran *quantum* berbantuan media video dengan kelompok siswa yang tidak dibelajarkan model pembelajaran *quantum* berbantuan media video pada siswa kelas IV SD. Dengan demikian, penggunaan model pembelajaran quantum berbantuan media video akan berpengaruh terhadap hasil belajar IPA siswa kelas IV SD.

ABSTRACT

The learning model applied tends to be still centered on the teacher (teacher-centered), so this study aims to determine the effect of a quantum learning model assisted by video media on fourth-grade elementary school science students' learning outcomes. This type of research is a quasi-experimental research design with Non-equivalent Post-Test Control Group Design. The population in this study were 133 students. Sampling was taken by random sampling. The method used in data collection is an objective test. Data analysis through descriptive and inferential statistical analysis stages. Based on the results of t-test calculations show (t = 5.54 sig = 0.00). It shows differences in science learning outcomes between groups of students taught with a quantum learning model assisted by video media and groups of students who are not taught a quantum learning model assisted by video media to fourth-grade elementary school students. Thus, using a quantum learning model assisted by video media will affect science students' learning outcomes in grade IV elementary school.

1. Introduction

One of the lessons taught at the elementary school level is Natural Science or Science. Science is one of the main subjects in Indonesia's education curriculum, including at the elementary school level. Science is the study of nature and everything in it. According to Haryanto (2015) Natural Science is a systematic and generally applicable science that discusses the surrounding environment and its contents, events, and symptoms that appear in nature. Natural science learning in elementary school is very important for students. By providing science learning, students can master knowledge, facts, concepts, principles, discovery, and a scientific attitude beneficial for studying natural surroundings. Related to the objectives

Corresponding author
E-mail addresses: : kusmayaniera@gmail.com (Era), ketutdibia31@gmail.com (Dibia) yudasukmanatp13@gmail.com (Yuda)

of learning science (Trianto, 2012) states that, 1) can provide knowledge to students about the world as a place to live, 2) students can develop curiosity and instill a positive attitude towards science, 3) science concepts will be useful for students in developing knowledge and understanding that can be applied in everyday life, 4) able to educate students to appreciate and know how scientists work and their findings, 5) apply and use a scientific method in solving problems.

Observing the purpose of holding science learning, this science learning should be held with full preparation. As the organizer, the teacher must manage learning resources so that the science learning material can be understood and mastered by students properly. The teacher has a very important role in building student interactions in the learning process. The learning process is effective if the learning atmosphere is pleasant, and all students can be actively involved, both physically, mentally, and socially (Susasnto, 2013). In the learning process, various changes in students, such as student activity in learning, will increase. There is a reciprocal relationship between teachers and students, between students and teachers, and between students and other students. In addition, effective learning can improve student learning outcomes, increase student learning motivation, and create a pleasant learning atmosphere. But in reality, science learning is not always as expected. Teachers still dominate the science learning process and do not provide students with access to independently through their findings and thought processes. Implementing the learning process in the classroom is only directed at students' ability to memorize material without understanding the material they get.

Based on the results of observations carried out on 21, 22, and 26 October 2019, it can be seen that the science learning process in the fourth grade of SD Gugus III, Kecamatan Sukasada, 1) there is still a lack of learning models applied by teachers that involve students actively in participating in classroom learning activities. . The model applied tends to be teacher-centered, so students will only become passive listeners in the learning process. 2) teachers do not take advantage of the facilities and infrastructure to support learning activities in schools. It causes learning activities to be less attractive, and students feel bored easily because they only listen to explanations from the teacher. 3) teachers rarely condition students in the learning process to make discoveries. It can be seen when students are only assigned to note and remember the material that has been given.

Apart from observation, data collection was also carried out through interviews with each of the grade IV teachers. The problems presented by the teacher through interviews were, 1) students had difficulty understanding the material they were learning. It can be seen when the teacher appoints students to answer a question. Students are not able to answer the questions given by the teacher, and some students answer but not quite rightly, 2) the teacher has difficulty managing the class. It is because the characteristics of each student in the study are different, some are active, quiet, and some children have low cognitive levels.

Based on the results of recording documents on science learning outcomes, it is known that the fourth-grade students in the first semester in Gugus III, Kecamatan Sukasada, Academic Year 2019/2020 were 133, with 103 students who had not reached the KKM, meaning that the results of fourth-grade students in the first semester in Gugus III District Sukasada for the 2019/2020 academic year is still low. Students' low learning outcomes certainly have to be addressed so that various efforts to improve science learning methods, techniques, and strategies are continuously carried out. If the problem is not resolved immediately, it will impact learning goals, and students will also experience failure.

The models and learning media suitable for solving science learning problems are quantum learning models assisted by video media. It is also supported in research by Dananjaya, et al. (2017), which states that based on the fact that media with visual sources can significantly assist students in digesting learning material, and video media is the right solution for perfecting quantum learning models. The quantum learning model will provide an alternative to avoid boredom in students. Using learning media can be a supporting tool for a teacher in delivering learning material. The quantum learning model will make the learning process more meaningful because it links learning material with everyday life in this learning model. The quantum learning model is a learning model that can change students' natural talents and abilities for the better, which will benefit them and others (Sohimin, 2014). The quantum learning model also includes all interactions and differences that maximize learning moments (Nugroho, 2013).

DePorter (in Sohimin, 2014) the quantum learning model has six teaching phases which include 1) grow, 2) naturally, 3) name, 4) demonstrate, 5) repeat, and 6) celebrate, which is then abbreviated as TANDUR. With the quantum learning model phase, learning will be more fun and meaningful for students. The quantum learning process has a well-interwoven interaction between teacher and students. This interaction can lead to familiarity, sympathy, and mutual understanding from students to teachers and teachers. Good relationships can make it easier for teachers to involve students in the learning process. In addition to applying the learning model, media assistance also plays an important role in the learning

process to increase student activity in learning. One of the appropriate media to improve student learning outcomes is to use video media during the learning process. Video is a medium that is systematically designed based on the curriculum. Its development applies to learn principles to more easily understand learning material (Dewi & Krisna, 2012). Meanwhile, according to (Yunita, 2017), video media is a component or media capable of displaying images and sound simultaneously. Video as an audio-visual media displays elements of images that can be seen and elements of sound that can be heard. With this video media, students will easily remember and understand a lesson to increase learning outcomes. This study aimed to determine the effect of the quantum learning model assisted by video media on fourth-grade elementary school students' learning outcomes in Gugus III, Kecamatan Sukasada, Academic Year 2019/2020.

2. Method

The implementation of this research was conducted at SD Gugus III, Kecamatan Sukasada, Buleleng Regency. This research's timing is in the even semester of the 2019/2020 school year. This research is quasi-experimental. This study using a Non-Equivalent Post-Test Only Control Group Design design. The population is the whole object in a study. Sudjana (in Agung, 2014: 09) states that population is the totality of all possible scores, the results of counting and measurement, quantitative and qualitative rather than certain characteristics regarding a complete and clear set of objects that want to study their properties. This study's population were all fourth-grade students at SD Gugus III Kecamatan Sukasada, amounting to 8 schools, SD Negeri 1 Padangbulia with 23 students, SD Negeri 2 Padangbulia with 12 students, SD Negeri 3 Padangbulia with 24 students. SD Negeri 1 Pegadungan totaling 14 students, SD Negeri 2 Pegadungan totaling 13 students, SD Negeri 3 Pegadungan totaling 16 students, SD Negeri 1 Silangjana totaling 18 students, and SD Negeri 2 Silangjana totaling 13 students. . To find out whether the ability of each student in SD Gugus III Kecamatan Sukasada is equal or not, all members of the population are tested for equality by analyzing the score of Mid-Semester Deuteronomy in Science subjects using the One Line Anava formula. Based on the equivalence test results using Microsoft Excel 2010 at a significant level of 5%, the Fcount score is 0.02, and the Ftable score is 2.08. It means that all fourth-grade elementary school students in Gugus III Kecamatan Sukasada have equal academic abilities.

After carrying out the equivalence test, the sample will be determined. According to (Agung, 2014: 10) the sample is part of the population directly subject to research. The technique used in determining the sample in this study is the random sampling technique. The random sampling technique is a sampling method by providing equal opportunities to members of the population to become sample members. The first stage was carried out by drawing the fourth-grade elementary school in Gugus III, Kecamatan Sukasada, to obtain two classes: the research samples. Then obtained grade four SD Negeri 1 Padangbulia, amounting to 23 students, and SD Negeri 3 Padangbulia totaling 24 students as the research sample. The total number of students is 47 students. The second stage was a drawing to determine the experimental class and the control class from the two schools that had been selected. In selecting the experimental class and the control class, a random sampling technique was also carried out. The lottery results determined that the fourth grade at SD Negeri 3 Padangbulia as the experimental group, and the fourth grade at SD Negeri 1 Padangbulia as the control class.

The data collected in this study were data about students' science learning outcomes in the cognitive domain. The data collection method used in this study is a test method in multiple-choice/objective tests. The learning outcome test used is adjusted to the students' cognitive abilities, and then a validity test is carried out by an expert in science and a trial test. After that, the content validity test, the test item validity, reliability, difficulty level test, and difference power test was carried out. There were 30 questions about learning science after field trials, 5 questions were failed, and 25 questions were valid.

Furthermore, this research's data analysis techniques are two descriptive statistical analysis techniques and inferential statistics. Descriptive statistical analysis used, the average score (mean) of each variable was converted using the ideal average criteria (Mi) and the ideal standard deviation (SDi), as well as to determine the five rating scale. While inferential statistical analysis must be fulfilled before carrying out the main data analysis to test the research hypothesis is the normality test of data distribution in each group and the homogeneity test of variance between groups.

3. Result and Discussion

The research results regarding the experimental group's science learning outcomes and the control group can be seen in table 01.

Table 01. Description of Science Learning Outcomes Data in the Experiment Group and the Control Group

Statistic	Experiment Group	Control Group
N	24	23
Mean	21,16	16,95
Median	20,95	17,33
Mode	22,83	18,83
Highest Score	24	22
Lowest Score	18	14
Standard Deviation	1,86	2,46

The average score of student learning outcomes in the experimental group (M) was 21.16. Based on the results, it can be stated that the average student learning outcomes of the experimental group are in the High category. Simultaneously, the average learning outcomes in the control group (M) were 16.95 in the moderate category. Based on the results, the average score of student learning outcomes in the experimental group is better than the control group.

Before testing the hypothesis, prerequisite testing was first carried out on the distribution of data, which included the normality test and the homogeneity of variance on student science learning outcomes data as a prerequisite for using the t-test. Data normality and homogeneity tests were carried out using the SPSS version 16.0 for the Windows application program. The normality and homogeneity tests were carried out using the experimental and control class students' post-test scores. The data normality test was performed using the Kalmogorov-Smirnov statistical technique. While the homogeneity test used is the F-test with the criteria for homogeneous data if Fhit <Ftab (Koyan, 2012: 105).

Based on analizie above shows that the significance level for the post-test in the experimental group and the control group is 0.20 means, X2 is the post-test result of the experimental group and the control group is smaller X2 table (X2hitung <X2table) so that the post-test result data of the experimental group and the control group was normally distributed. The normality test results showed that the experimental group and the control group were 0.20, while the Ftab was 0.05. It means that the experimental group's science learning outcomes variance and the control group are homogeneous. Based on the prerequisite test for data analysis, it was found that the student learning outcomes of the experimental group and the control group were normal and homogeneous. After the data analysis prerequisite test results were obtained, the analysis was continued by testing the research hypothesis.

Hypothesis testing based on normally distributed and homogeneous data was carried out using the t-test with SPSS for Windows. The test criterion is that the null hypothesis is rejected if the significance score obtained is less than 0.05. Based on the results of the t-test, the following results were obtained. The sig score in the sig (2-tailed) column and the equal variances assumed line is 0.00. This significance score is smaller than 0.05, so that H0 is rejected and H1 is accepted. These results indicate that there is a significant effect on science learning outcomes between students who take the quantum learning model assisted by video media and students who do not follow the quantum learning model assisted by video media in fourth-grade elementary school students in Gugus III, Kecamatan Sukasada, Academic Year 2019/2020.

Based on the field's findings during the learning process using a quantum learning model, making students ready to learn and responsible for finding answers to existing problems. With this readiness and responsibility, students become active in learning to improve their learning outcomes. (Aviana & Hidayah, 2015; Jayadiningrat et al., 2017; Mulyani, 2013) states that an individual's readiness as a student in participating in learning activities will determine the quality of the process and student achievement. This readiness is in mental readiness, including intelligence, interest, talent, readiness, maturity, attention, and concentration. Meanwhile, according to (Pangestu, 2018) states that readiness is the overall condition of an individual that makes him ready to respond or answer a certain way to a situation. Responsibility in learning is an obligation to complete tasks that have been completely accepted through maximum effort and dare to bear all the consequences (Syafitri, 2017). Individual readiness in the learning process supported by the quantum learning model can be seen through six learning steps abbreviated as "TANDUR": Grow, Experience, Name, Demonstrate, Repeat and Celebrate.

The growth stage is a process of fostering student motivation and enthusiasm for learning. In the learning process, the teacher explores students' knowledge by making perceptions related to the material, conveying learning objectives, and forming groups. This stage can foster interest in learning and increase students' curiosity about the material they will learn. (Junaidi, 2015; Suwardi & Ratifi, 2012) states that a good learning situation is a learning situation that is carried out with a sense of joy or liking and fosters a

sense of student curiosity, because when students learn based on a sense of pleasure and high curiosity, a learning concept will be able understood, understood well by students.

This concept implies that in teacher learning, the natural stage must provide experience and benefit to students' knowledge. Strategies that can be used are to provide illustrations or pose problems related to the real-life context of the concepts students will learn. Students make observations according to the teacher's instructions, observing the video played in front of the class. Through video media, students can see a phenomenon that may not be seen directly, so that video media can increase student interest in learning. In line with (Firmansyah, 2015; Muldayanti, 2013) states that interest in learning is a psychic statement that indicates a focus on a subject matter because the object is attractive to him and a great desire for something someone has.

The third stage is naming, naming, in this case, is teaching concepts, practicing thinking skills, and learning strategies. The teacher provides a student worksheet (student worksheet) to be discussed in the group. During group discussion activities, students were seen actively discussing and exchanging ideas with their group friends. Discussion activities can create a conducive situation because learning with peers makes it easier to exchange ideas and argue according to observations. It is also supported in Dewi's research (Anidityas, et al, 2012), which proves that student boredom can be overcome through active movement when students are in group discussion activities with flip chart guidelines in each group so that the application of this learning can increase student learning independence in learning biology.

Demonstration stage, the essence of this concept is to allow students to demonstrate their ability to construct knowledge/concepts. The strategy used by the teacher at this stage is to provide opportunities for students to present the results of discussions that have been carried out with their groups. By presenting the discussion results in front of the class, students can foster self-confidence in expressing an opinion. According to (Longkutoy et al., 2015; Syam & Amri, 2017), self-confidence is one of the positive actualization results. By having self-confidence, students can develop their talents and potentials to develop into a successor. The so-called self-confidence achievement can be manifested through a courageous and confident attitude in doing something.

Repeat stage, the more often the repetition is done, the deeper the knowledge will be. Repeat stage can be done by reaffirming the subject matter of the lesson or through practice questions. In the research that has been done, at this stage, the teacher conducts questions and answers and provides evaluation questions to students. With the question and answer activity, students look active and enthusiastic in expressing opinions. Activeness in learning activities occurs because of the interaction and communication between students and other students and between students and teachers. According to (Kulsum & Hindarto, 2011; Mardiyan, 2012; Suarni, 2017), the activeness of students in the learning process is necessary because student activeness in participating in learning activities is student involvement in the form of student attitudes, thoughts, or actions and student activity during the process. Learning also depends on the interaction of students with their environment.

The celebrated stage is recognition for completion, participation, and acquisition of skills and knowledge. At this stage, it can be done with praise, applause, and singing along. This celebration is useful for teaching students about learning motivation, success, and steps to victory. In this stage, the teacher gives praise, which encourages students to stay enthusiastic in learning activities. Students look very happy and fully involved in helping teachers determine which individuals and groups are most active in the learning process. Hernowo (in Handayani, 2014) states that joy when learning means the awakening of interest, full involvement, and the creation of meaning, understanding (mastery of the material being studied), and the score that makes students happy is giving birth to something new. Thus the quantum learning model can create a fun learning atmosphere to improve their learning outcomes.

In addition, the classroom's learning process is also supported by the teacher's video media. The use of video media in the learning process is a tool and a carrier of information or messages. It is in line with the opinion (Anindya Wati, 2013; Hadi, 2017; Widyaningrum & Wijayanti, 2017), which states that using video media in learning can improve student outcomes because video media can attract students' attention in learning. After all, some pictures and videos make students want to ask questions and increase knowledge so that it will have an impact on learning outcomes. With video media, students can also understand learning messages more meaningfully so that the information conveyed through videos can be understood by students as a whole.

It is different from the control group who was not taught the quantum learning model. Most teachers deliver material using the lecture method, question and answer in the control group and continue with assignments. So that in rare cases of finding renewal in the implementation of learning and sometimes learning is also more teacher-centered. The results in a lack of student involvement and student activity in learning. With this learning, students become bored and less enthusiastic in learning activities.

Thus the results of this study prove that the quantum learning model influences student learning outcomes. Of course, in this case, student learning outcomes are increasing. It can be seen from the learning that emphasizes more active students and describes new ways in the group. At the same time, the teacher only serves as a facilitator and motivator in learning.

4. Conclusion

Based on the results of the research and discussion above, it can be concluded that the group of students who were taught with the video media assisted quantum learning model was higher than the group of students who were not taught with the video media assisted quantum model. This review is based on the average score of student learning outcomes. The average score of student learning outcomes in the experimental group is in the high category. Simultaneously, the average score of student learning outcomes in the control group is in the medium category. These calculations indicate that the study results are significant, which means that the quantum learning model assisted by video media affects fourth-grade elementary school students' learning outcomes in Gugus III, Kecamatan Sukasada, Academic Year 2019/2020. Suggestions put forward are based on the results of research and discussion, 1) it is suggested to the principal to provide opportunities for teachers to apply innovative learning models, one of which is the quantum learning model and provides media or tools that support the learning process in the classroom to improve student learning outcomes. 2) It is recommended that teachers design innovative and creative learning so that learning varies and, of course, will make children happy to learn, and the learning that is carried out will be more meaningful. 3) It is recommended that teachers use a learning model that can involve students' active role in learning, applying a quantum learning model assisted by video media. 4) It is recommended that other researchers who conduct further research on the quantum learning model with video media on student science learning outcomes can use this research as an additional reference.

References

Agung, A. A. Gede. 2014. *Buku Ajar Metodologi Penelitian Pendidikan*, Ediisi 2, Cetakan Pertama. Singaraja: Aditya Media Publishing. http://repo.undiksha.ac.id/3716/8/1611031101-DAFTAR%20PUSTAKA.pdf

Anidityas, N. A., Utami, N. R., & Widiyaningrum, P. (2012). Penggunaan alat peraga sistem pernapasan manusia pada kualitas belajar siswa SMP kelas VIII. Unnes Science Education Journal, 1(2).. (diakses tanggal 20 Juni 2020). 10.15294/USEJ.V1I2.865

ANINDYA WATI, L. I. N. A. K. S. I. T. A. (2013). Pemanfaatan Media Video Pembelajaran Untuk Meningkatkan Hasil Belajar Ips Pada Siswa Kelas IV SDN Babatan I/456 Surabaya. Jurnal Penelitian Pendidikan Guru Sekolah Dasar, 1(1), 1-10.. Diakses pada tanggal 25 Juni 2020. https://jurnalmahasiswa.unesa.ac.id/index.php/jurnal-penelitian-pgsd/article/view/792

Aviana, Ria. 2015. "Pengaruh Tingkat Konsentrasi Belajar Siswa Terhadap Daya Pemahaman Materi Pada Pembelajaran Kimia Di Sma Negeri 2 Batang". Jurnal Pendidikan Sains. Universitas Muhammadiyah Semarang. Volume: 3 Nomor:1. Daikses pada tanggal 17 Juli 2020. http://dx.doi.org/10.23887/jisd.v4i4.26489

Dananjaya, I. G., Suastra, I. W., & Sudiatmika, A. A. I. A. R. (2017). Penerapan Model Quantum Learning Berbantuan Media Video Sebagai Upaya Meningkatkan Motivasi Dan Hasil Belajar Siswa. *Wahana Matematika dan Sains: Jurnal Matematika, Sains, dan Pembelajarannya*, *9*(2), 32-43. http://dx.doi.org/10.23887/wms.v9i2.12651

Dewi, Ni Luh Pt. Gd. Krisna. 2012. "Pengaruh Model Pembelajaran Kuantum Berbantuan Media Video Kontekstual Terhadap Hasil Belajar IPA Siswa Di SDN 2 Dangin Puri" . *Jurnal PGSD.* Undiksha. Diakses pada tanggal: 19 Oktober 2019 http://dx.doi.org/10.23887/jisd.v4i4.26489

Firmansyah, Dani. 2015. "Pengaruh Strategi Pembelajaran Dan Minat Belajar Terhadap Hasil Belajar Matematika". Jurnal Pendidikan Unsika. Universitas Singaperbangsa Karawang. Volume:3 Nomor:1. Diakses pada tanggal 17 Juli 2020. http://dx.doi.org/10.23887/jisd.v4i4.26489

Hadi, S. (2017). Efektivitas Penggunaan Video Sebagai Media Pembelajaran Untuk Siswa Sekolah Dasar. In *Seminar Nasional Teknologi Pembelajaran Dan Pendidikan Dasar 2017* (pp. 96-102).

Handayani, Ni Luh Eka & Ida Bagus Ketut Perdata. 2014. *Meningkatkan Aktivitas Dan Prestasi Belajar Siswa Melalui Penerapan Model Pembelajaran Qt Dengan Kerangka Tandur Dalam Pembelajaran Bangun Segi Empat Pada Siswa Kelas VII C SMP Pancasila Canggu Tahun Pelajaran 2011/2012*. Jurnal Santiaji Pendidikan. Volume 4 Nomor 1. (diakses tanggal 20 Juni 2020). http://jurnal.unmas.ac.id/index.php/JSP/article/view/55

Haryanto, I Nyoman. 2015. "Pengaruh Model Pembelajaran Kooperatif Tipe STAD Berbantuan Video Animasi Terhadap Hasil Belajar IPA Dan Kreativitas Siswa SMPLB C Negeri Denpasar". *e-Journal Program Pascasarjana* Universitas Pendidikan Ganesha. Vol: 5 No: 1 Tahun: 2015. Diakses pada tanggal: 21 Oktober 2019. https://jurnal.ustjogja.ac.id/index.php/NATURAL/article/view/1854

Jayadiningrat, Made Gautama. 2017 "Meningkatkan Kesiapan Dan Hasil Belajar Siswa Pada Pembelajaran Kimia Dengan Pemberian Kuis Di Awal Pembelajaran". *Jurnal Pendidikan Kimia Indonesia*. Universitas Pendidikan Ganesha. Vol: 1 No:1. Diakses pada tanggal 17 Juli 2020.

Junaidi, M. 2015. "Upaya Menumbuhkan Rasa Ingin Tahu Siswa Mengenai Konsep Matematika Menggunakan Abakus". *Jurnal Pendidikan Dasar*. Universitas Tanjungpura Pontianak. Vol: 3 No: 1. Diakses pada tanggal 20 Juni 2020. http://dx.doi.org/10.23887/jisd.v4i4.26489

Koyan, I Wayan. 2012. *Statistik Pendidikan, Teknik Analisis Data Kuantitatif*. Singaraja: Universitas Pendidikan Ganesha. https://ejournal.undiksha.ac.id/index.php/JPI/article/download/8154/8610

Kulsum, U., & Hindarto, N. (2011). Penerapan model learning cycle pada sub pokok bahasan kalor untuk meningkatkan keaktifan dan hasil belajar siswa kelas VII SMP. *Jurnal Pendidikan Fisika Indonesia*, *7*(2). https://doi.org/10.15294/jpfi.v7i2.1085

Longkutoy, N., Sinolungan, J., & Opod, H. (2015). Hubungan pola asuh orang tua dengan kepercayaan diri siswa SMP Kristen Ranotongkor kabupaten Minahasa. eBiomedik, 3(1). Diakses pada tanggal 17 Juli 2020. https://doi.org/10.35790/ebm.3.1.2015.6612

Mardiyan, R. (2012). Peningkatkan keaktifan dan hasil belajar siswa dalam pembelajaran akuntansi materi jurnal penyesuaian pada siswa kelas xi ips 3 SMA Negeri 3 Bukittinggi dengan metode bermain peran (role playing). *Pakar Pendidikan*, *10*(2), 151-162. https://journal.unesa.ac.id/index.php/jpap/article/view/8320

Muldayanti, N. D. 2013. "Pembelajaran Biologi Model Stad Dan Tgt Ditinjau Dari Keingintahuan Dan Minat Belajar Siswa". *Jurnal Pendidikan IPA Indonesia*. Universitas Muhammadiyah Pontianak. Vol: 2 No:1. Diakses pada tanggal 20 Juni 2020. http://dx.doi.org/10.23887/jisd.v4i4.26489

Mulyani, D. 2013. Hubungan kesiapan belajar siswa dengan prestasi belajar. Konselor, 2(1). Diakses pada tanggal 17 Juli 2020. https://doi.org/10.24036/0201321729-0-00

Nugroho, B. A. P. (2013). Keefektifan Pembelajaran Menulis Puisi Dengan Menggunakan Model Pembelajaran Kuantum Tekniktandurdan Teknikambakpada Peserta Didik Smp (Rsbi Dan Non-Rsbi. *Seloka: Jurnal Pendidikan Bahasa dan Sastra Indonesia*, *2*(1). 10.15294/SELOKA.V2I1.1319

Pangestu, Dian Putri. 2018. "Pengaruh Kesiapan Belajar Terhadap Keaktifan Peserta Didik dalam Proses Pembelajaran AUD". *Jurnal Ilmiah Tumbuh Kembang Anak Usia Dini*. Volume: 3 No: 2. Diakses pada tanggal 15 Juni 2020. http://dx.doi.org/10.23887/jisd.v4i4.26489

Prabawanti, Estu Hari. 2015 "Penerapan Model Pembelajaran Quantum Teaching Dengan Metode Diskusi Berbantuan Lembar Kerja Siswa (Lks) Untuk Meningkatkan Hasil Belajar Materi Bentuk Pangkat Dan Akar Pada Siswa Kelas X.6 Semester I Sma Negeri 2 Magetan Tahun Pelajaran 2013/2014". *Jurnal Ilmiah Pendidikan Matematika*. Volume: 3 Nomor 2. Diakses pada tanggal 17 Juli 2020. http://e-journal.unipma.ac.id/index.php/jipm/article/view/508

Shoimin, Aris. 2014. *68 Model Pembelajaran Inovatif dalam Kurikulum 2013*.Yogyakarta: AR-RUZZ Media

Suarni, S. (2017). Meningkatkan Keaktifan Belajar Siswa Pada Kompetensi Dasar Organisasi Pelajaran Pkn Melalui Pendekatan Pembelajaran Pakem Untuk Kelas Iv Sd Negeri 064988 Medan Johor Ta 2014/2015. PASCAL (Journal of Physics and Science Learning), 1(2), 129-140. Diakses pada tanggal 25 Juni 2020. https://jurnal.uisu.ac.id/index.php/PASCAL/article/view/347

Susanto, Ahmad. 2013. *Teori Belajar dan Pembelajaran di Sekolah Dasar*. Jakarta: Kencana Prenada Media Grup.

Suwardi, Dana Ratifi. 2012. "Faktor-Faktor Yang Mempengaruhi Hasil Belajar Siswa Kompetensi Dasar Ayat Jurnal Penyesuaian Mata PelaJaran Akuntansi Kelas Xi Ips Di Sma Negeri 1 Bae Kudu". *Economic Education Analysis Journal.* Universitas Negeri Semarang. Volume: 1 Nomor:2. Diakses pada tanggal 17 Juli 2020. https://ejournal.undiksha.ac.id/index.php/JISD/article/view/26489

Syafitri, Rodhiyah (2017). "Meningkatkan Tanggung Jawab Belajar Melalui Strategi *Giving Questions And Getting Answers* Pada Siswa". *Jurnal Penelitian dan Pengembangan*. Universitas Pendidikan Ganesha. Vol:1 No:1. Diakses pada tanggal: 15 Juni 2020. https://ejournal.undiksha.ac.id/index.php/JISD/article/view/26489/0

Syam, A., & Amri, A. (2017). Pengaruh kepercayaan diri (self confidence) berbasis kaderisasi IMM terhadap prestasi belajar mahasiswa (studi kasus di program studi pendidikan biologi fakultas keguruan dan ilmu pendidikan universitas muhammadiyah parepare). Jurnal Biotek, 5(1), 87-102. Diakses pada tanggal 25 Juni 2020. https://doi.org/10.24252/jb.v5i1.3448

Trianto. 2012. *Model Pembelajaran Terpadu*. Jakarta: Bumi Aksara .

Widyaningrum, D. A., & Wijayanti, T. (2017). Pemberdayaan hasil belajar afektif mahasiswa melalui model pembelajaran search, solve, create, and share (SSCS) berbantuan media video. *Didaktika Biologi: Jurnal Penelitian Pendidikan Biologi*, *1*(2), 105-112. https://doi.org/10.32502/dikbio.v1i2.679

Yunita, Dwi. 2017. "Pengaruh Media Video Pembelajaran Terhadap Hasil Belajar IPA Ditinjau Dari Keaktifan Siswa". *Jurnal LP3M.* Universitas Sarjanawiyata Tamansiswa. Vol:3 No:2. Diakses pada tanggal 30 Januari 2020 https://ejournal.undiksha.ac.id/index.php/JISD/article/view/26489