

The Effect of Quantum Learning Model Assisted by Animation Media on PPKn Learning Outcomes of Class V

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Abstract. This research is a literature research that aims to investigate the extent of the impact of adopting the Quantum Learning model with the help of animation media as one way to enhance grade V students' learning results in PPKn topics. Learning outcomes are benchmarks that determine the level of success of students in understanding a subject matter. However, based on observations in grade V of SDN 4 Sukamanah, data were obtained that PPKn learning outcomes were still low due to: (1) internal factors such as lack of student interest and motivation; (2) external factors such as the lack of appropriate use of learning methods used by teachers. Because it is a learning model that blends cognitive and quantum theory, the quantum learning model can be utilized as an alternative, affective, and psychomotor aspects in order to create a holistic and interactive learning experience so that it can help improve learning outcomes. Data collection researchers use previous studies such as Papers from Scientific Journals, Papers from conferences, and Thesis. The results of classical data analysis showed an increase from the lowest of 68.29 to the highest of 88.29. From some data that researchers make as a reference, The Quantum Learning learning model yields average student learning outcomes. Before using the learning methodology Quantum Learning, it was 57.30 and after employing the Quantum Learning paradigm of learning, it increased to 78.72. It can be concluded that the Quantum Learning learning model assisted by animation media can improve student learning outcomes in PPKn subjects.

Keywords: Quantum Learning Model, Animation Media, PPKn Learning Outcomes

1. Introduction

PPKn (Citizenship education and Pancasila) are two topics thattaught in elementary school, PPKn learning leads to the development of citizens who are aware of and capable of upholding their obligations and rights in order to develop wise, knowledgeable, and moral Indonesian citizens as required by Constitution of 1945 and Pancasila (Regarding content standards, Permendiknas No. 22 of 2006).

In the context of Pancasila, the Indonesian Republic's 1945 Constitution, Bhinneka Tunggal Ika, and the Unitary State of Indonesia, PPKn learning has fully incorporated the philosophy, principles, and ethics of Pancasila with the general psychopedagogical and sociocultural demands of citizens. (Winataputra, 2016: 23). PPKn learning in grade V at the basic education level is aimed at introducing the values of Pancasila, the concepts of democracy, rights and responsibilities as citizens, as well as knowledge of Indonesian heritage.

Based on the findings of the preliminary observations done among students in grade V at SDN 4 Sukamanah, it was found that the learning carried out was still dominant in teachers using conventional learning models, such as lecture methods, reading textbooks, and doing LKS. This makes students learn individualistically and makes student participation less during learning, where students are limited to hearing the teacher's explanation or writing what the teacher commands, and less actively and interactively involved in learning, eventually students often look less enthusiastic

during learning and look less attentive.

Entering the digital era and today's technology, An intriguing alternative to traditional teaching methods is the use of animation and quantum learning models. A learning paradigm called quantum learning takes into account each student's unique learning preferences as well as their physical, emotional, social, and intellectual elements.

DePorter (2010: 34) defines quantum learning as the change of different interactions that take place during and immediately after learning. These interactions contain components for efficient learning that affect student achievement. According to this paradigm, learning is a complicated phenomenon. Everything can be interpreted as every word, idea, and deed. The degree to which the instructor alters the setting, method of delivery, and structure of the lesson will determine how far the learning process proceeds.

Meanwhile, Animation Media is able to provide interesting, interactive visualizations, and can stimulate students' imagination. The combination of Quantum Learning and Animation Media is expected to create a more memorable learning experience, increase motivation, and facilitate the understanding of PPKn concepts that may be abstract for grade V students.

The Quantum Learning Model centers on the dynamic relationship between students and the environment as a design and foundation for learning. With the addition of animation media, concepts that are difficult to understand can be explained in a a more engaging and simple approach. This can increase academic engagement and cut down on boredom in kids. Research on "The Effect of Quantum Learning Models Assisted by Animation Media on PPKn Learning Outcomes of Class V Students" is therefore of interest to academics.

2. Research Methods

This research uses research with literature study methods. The search for sources or professional perspectives on a subject linked to research goals is known as literature study. Sugiyono (2017:291). In order to provide theoretical and scientific information about the use of the Quantum Learning paradigm in elementary school children's educational institutions, this research review describes the knowledge, ideas, or insights contained in the literature.

The term "literature study research" refers to a wide range of activities involving library data gathering techniques, such ass reading, noting, studying, and processing data to produce new research. While the data gathering method used in this study makes use of prior research, including books, articles, journals, theses, and other sources relevant to the research issue under consideration. This study's objective was toascertain how the learning of quantum mechanics paradigm, with via means of animation media, affected the education outcomes of PPKn grade V pupils. The steps of the literature review comprise:

- a. Collect relevant data through books, articles, journals, theses and theses.
- b. Analyze or observe the data to be studied, so that researchers can conclude the problem to be studied in more detail.

The method of data analysis that is being employed is called content analysis. In order to preserve the accuracy of research results and reduce errors caused by researcher flaws, or in other words, to prevent information misdelivery, repeated readings of the literature and library comparisons are conducted. The method of data analysis that is being employed is called content analysis. In order to preserve the accuracy of research

results and reduce errors caused by researcher flaws, or in other words, to prevent information misdelivery, repeated readings of the literature and library comparisons are conducted.

This research is reported by compiling the findings based on the Improving Science Learning Outcomes Through Quantum Learning Models in Elementary Schools of simplicity. This is because researchers have limitations in conducting indepth and more detailed literature reviews. In addition, simplicity in delivering results is made to make it easier for readers to understand the core content of the elementary school level of the Quantum Learning approach aided by animated media.

3. Result and Discussion

Considering the findings of the analysis that the researcher carried out through a literature review by reading a range of documents relevant to the study's focus, several important points were found in order to implement Quantum Learning learning in elementary school institutions.

The first is related to conceptual understanding of Quantum Learning, Quantum Learning learning principles and their implementation into PPKn subjects. Conceptual understanding of Quantum Learning learning will provide a clear path to the learning design process so that it is easier in the implementation process.

The second is related to the use of animation media as an auxiliary medium in the use of Quantum Learning models. In learning activities, animation media itself serves to attract students' attention to make it easier to understand learning material. That way, in addition to utilizing learning media, researchers also produce learning innovations that are different from ordinary learning.

Problems in student learning outcomes, especially PPKn subjects in elementary schools, are something that needs attention. Various solutions need to be done so that the problem can be resolved, so that the learning outcomes of the students themselves can improve. As stated by DePorter and Hernacki (Arifin, Sudarti, &; Lesmono, 2016) A method of learning called quantum learning is able to sharpen understanding and memory, and provide understanding to students that learning is a fun and useful process. This directly makes this model one of the solutions that can be done with overcome results of student learning that are still relatively low.

Model of quantum learning is claimed to be effective if it is proven to bring change after research. In this case, researchers examine the result of using the Quantum Model for learning about student learning outcomes. In other words, the Quantum Learning model is said to be effective if the final results show an improvement in learning outcomes for students after with the model. Here are some data from references that researchers use to see the average comparison of students' education outcomes before and after quantum learning models, including:

No	Research reviewed		
	Judul Penelitian	Average Pre test	Average Post test
1	The Effect of Using the Quantum Learning Learning Model on PPKn Learning Outcomes of Grade V Elementary School Students	47,40	78,20.
2	The Impact of the Quantum Learning Model on Student Learning Outcomes in Science	47,04	84
3	The Impact of the Quantum Learning Learning Model on Students' Capability to Solve Mathematical Problems	54, 56	68,29
4	Students in grade V in elementary schools can increase their self-efficacy and social studies learning outcomes by using quantum learning. Students in grade V in elementary schools can increase their self-efficacy and social studies learning outcomes by using quantum learning.	65,26	88,29
5	The Impact of Quantum Learning on Student Learning Outcomes in Indonesian SD Inpres Mallengkeri I	57	80
6	The Effect of Quantum Learning Model on Learning Outcomes of Class V Students at SD Negeri 060970	61,35	70,87
7	Students' Critical Thinking Skills and the Quantum Learning Learning Model	45,88	70,84
8	Impact of the Quantum Learning Learning Model on Student Learning Outcomes	64,33	74,17
9	Application of mind mapping learning model in quantum learning method to improve learning outcomes	63, 21	82, 06
10	Improving Science Learning Outcomes Through Quantum Learning Models in Elementary Schools	67	86

The table shows that there is a sizable average difference in student learning results prior to and following the application of quantum learning model. According to the aforementioned study's findings, student learning outcomes have increased across all studies that have been conducted. It can be seen that the first study's results showed an average difference in values of 30.8, the second study's results showed an average difference in values of 36.96, the third study's results showed an average difference in values of 13.37, the fourth study's results showed an average difference in values of 23.03, and the fifth study's results showed an average difference in values of 58.03.

4. Conclusion

Based on the analysis and discussion of some of the data that we use as a reference, it is clear which the Quantum learning model, when supported Improved student learning outcomes can be achieved through animation media. in PPKn lessons by boosting learning motivation, increasing student understanding, and all-around improving student learning outcomes.

All components of the learning process, such as guidelines for setting up a positive learning environment, distributing learning materials, and comprehending how pupils assimilate knowledge presented during the learning process, are empowered by quantum learning. Because it may make learning circumstances enjoyable, the Quantum Learning learning model can be utilized as a substitute to enhance learning results in student PPKn subjects.

The results of classical data analysis showed an increase from the lowest of 68.29 to the highest of 88.29. From some data that researchers make as a reference, The Quantum Learning learning model yields average student learning outcomes. It was 57.30 before using the Quantum Learning instructional design, and it improved to 78.72 after using the teaching strategy of quantum learning. The education results for students in PPKn topics can be improved by the Quantum Learning learning model with the help of animation media, it can be said.

References

- [1] DePorter, B., "Quantum Teaching Practices Quantum Learning in Classrooms," Bandung: Kaifa, 2010.
- [2] Faradiba, F., Lumbantobing, S. S., and Malau, N. D., "Application of quantum learning models to increase student motivation and learning outcomes," *International Journal of Progressive Sciences and Technologies (IJPSAT)*, 24(2), 272-276, 2021.
- [3] Harefa, A. L., Fau, H. S., & M.Ziraluo, "The Effect of Quantum Learning Learning Model on Student Learning Outcomes," *Aguinas Scientific Journal*, 179-187, 2023.
- [4] Herfinayanti, H., Amin, B. D., and A. Azis, "Application of the Quantum Learning Learning Model to the Physics Learning Outcomes of Class X Students of SMA Negeri 1 Sungguminasa," *Journal of Physics Education*, 5(1), 61-74, 2017.
- [5] Indrayani, K. A. A., Pujani, N. M., and Devi, N. P. L., "The Effect of Quantum Learning Model on Improving Student Science Learning Outcomes," *Indonesian Journal of Science Education and Learning (JPPSI)*, 2(1), 1-11, 2019.
- [6] Lestari, "Application of Mind Mapping Learning Model in Quantum Learning Method to Improve Learning Outcomes," *Edudikara: Journal of Education and Learning*, 3(3), 231-239, 2018.
- [7] M. Tawil, "Application of the Quantum Learning Learning Model with Presentation Media to Improve Physics Learning Outcomes of Class VII Students. 5 SMP Negeri 14 Makassar," *Journal of Physics Education, University of Muhammadiyah Makassar*, 3(1), 64-73, 2022.
- [8] Rahmani, A. M., and Muslihah, N. N., "The Effect of the Quantum Learning Learning Model on Students' Critical Thinking Skills," *Bale Aksara: Journal of Elementary School Education*, 1(2), 2020.
- [9] Riati, T., and Farida, N., "The influence of the quantum learning learning model on the mathematical problem solving ability of grade VIII students of SMP PGRI 02 Ngajum," Pi: Mathematics Education Journal, 1(1), 15-21, 2017.

- [10] Sari, N., "The influence of quantum learning models assisted by mind mapping media on student learning outcomes on straight-motion concept material," *Journal of Economic Education Studies and Economics*, 1-19, 2019.
- [11] Simanjuntak, D. P., Sembiring, N., Remigius, A., and Silaban, P. J., " The Effect of Quantum Learning Model on Learning Outcomes of Class V Students of SD Negeri 060970," *Jurnal Educatio FKIP UNMA*, 6(2), 413–418, 2020.
- [12] Sugiyono, Qualitative Quantitative Research Methods and R&D (*Metode Penelitian Kuantitatif Kualitatif Dan R&D*). Bandung: Alfabeta, 2017.
- [13] Suryanti, S., Cendera, C., Mintohari, M., and Istianah, F. "What is Visual Quantum Learning Effect to Student Learning Results," *In 2nd International Conference on Education Innovation (ICEI 2018) (pp. 382-388)*. Atlantis Press, 2018.
- [14] Syauki, A. Y., and Napiroh, I., "Quantum Learning Learning Model for Student Critical Thinking in PPKn Subjects," *TULIP (Educational Scientific Papers): Journal of the Faculty of Teacher Training and Education*, 10(2), 85-91, 2021.
- [15] Winataputra, U. S., "The Academic Position of Civic Education (Civics) and the Content / Subjects of Pancasila and Citizenship Education (PPKn) in the Context of the National Education System," *Journal of Social Morals*, 1(1), 15-36, 2016

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