

# THE EFFECT OF THE QUANTUM TEACHING LEARNING MODEL SUPPORTED WITH FLIP CHART MEDIA ON THE ABILITY TO DESCRIBE THE APPEARANCE OF THE EARTH SURFACE IN THE SURROUNDING ENVIRONMENT IN THIRD GRADE STUDENTS OF SDN TANARU

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**Abstract:** The background of this Study is direct interviews with Third-grades teachers at SDN Tenaru who have not used various models and learning media in teaching science subjects, especially regarding the basic competence of describing the appearance of the earth's surface in the surrounding environment. In teaching, they still use the old paradigm where the teacher gives knowledge to students passively with lecture and question and answer methods, so that classical learning completeness also cannot reach the minimum completeness criteria. The problems in this study are (1) is there any influence of the Quantum Teaching model supported by Flip Chart media on students' ability to describe the appearance of the earth's surface in the surrounding environment (2) is there any effect of the Quantum Teaching model without the support of Flip Chart media on the ability to describe the appearance of the earth's surface in the surrounding environment (3) is there a significant influence between the use of the Quantum Teaching model supported by Flip Chart media and the use of the Quantum Teaching model without Flip Chart media on the ability to describe the appearance of the earth's surface in the surrounding environment. Descriptive quantitative used as a data analysis technique. Based on the results of the posttest in this study it can be concluded that (1) There is an influence of the Quantum Teaching model supported by Flip Chart media on the ability to describe the appearance of the earth's surface in the surrounding environment (2) There is an influence of the Quantum Teaching model without the support of Flip Chart media on the ability to describe the appearance of the earth's surface in surrounding environment (3) the results of the ability to describe the appearance of the earth's surface in the surrounding environment using the Quantum Teaching model supported by Flip Chart media without Flip Chart media is proven by t-count 3.916 > t-table 2.024 sig level (5%) so t-count > t-table with df 38 and sign (2-tailed) 0.000 < 0.05 which means it is significant and the highest final score for the control class is 71.00 which is less than the final score for the experimental class 87.00.

**Keywords:** Earth's Surface, Flip Chart Media, Quantum Teaching Model

## INTRODUCTION

Education is not only aimed at producing a generation of knowledge, but also can make people have noble character and have the skills to live in society. This is in line with the goals of National education as stipulated in Law no. 20 of 2003 concerning the National Education system Chapter I Article 1 Paragraph 1 states that "education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, moral intelligence noble

character, as well as the skills needed by himself, the community, the nation and the State (Darmadi, 2018; Sadiman, 2011).

Based on the statement above, it can be concluded that education plays an important role in human life. Education can develop human potential both cognitively, affectively, and psychometrically (Marcia, 2009; Sewchuk, 2005). The purpose of education itself is a change in human behavior as indicated by changes in knowledge, changes in values and attitudes, and changes in skills.

In fact, based on observations made at SDN Tenaru, it was found that the learning process carried out by teachers in the natural

sciences subject, the basic competence of describing the appearance of the earth's surface in the surrounding environment in Third-grades, still uses the old paradigm, where the teacher dominates learning without giving opportunities students to be active in learning (Tomkins, 2016).

Referring to the results of the observations above, it is necessary to choose a learning model and interactive media but still be appropriate material. According to Siregar (2016) "Quantum Teaching is an interesting change of learning style with all its nuances and also includes all the links between interactions and differences that maximize learning moments." According to Parra-González (2020) "Flip Chart is a flip chart or drawing sheet to present a sequence of information which is difficult to explain in words.

## METHODS

According to Sugiyono (2016) states that "a variable is a quality (qualities) where Studyers study and draw conclusions". In this study, there are two variables used, namely the independent variable and the dependent variable.

### 1. The independent variable

According to Sugiyono (2016) the notion of "independent variable is a variable that influences or causes the change or the emergence of the dependent (dependent) variable". The independent variables in this study are the Quantum Teaching model and Flip Chart media.

### 2. The dependent variable

According to Sugiyono (2016) the dependent variable is the variable that is affected or becomes the result because of the independent variables that influence it. The dependent variable in this study is the ability to describe the appearance of the earth's surface in the surrounding environment.

The Study approach used in this study is a quantitative approach, because this Study uses data in the form of numerical figures. According to Sugiyono (2016), quantitative Study is Study data in the form of numbers and analysis using statistics. According to Sugiyono (2016) data collection techniques are tools used to Study and collect data presented in a systematic form to solve or test a hypothesis.

The type of Study used in this study is an experiment. The reason for using this technique is to find the influence between the use of the Quantum Teaching learning model supported by Flip Chart media on the ability to describe the appearance of the earth's surface in the surrounding environment. The Studyer used a Quasi Experimental Design Study design in the form of Nonequivalent Control Group Design, by analyzing X through the scores obtained from the pretest (Y1) and posttest (Y2).

The class that was used as the experimental group was students of Third-grades A at SDN Tenaru, which consisted of 20 students. Meanwhile, the control group was Third-grades B of SDN Tenaru, which consisted of 20 students. According to Booth (1987), "if the subject is less than 100 people, then all are taken". The samples taken in this study were students of Third-grades A and Third-grades B of SDN Tenaru.

In a study it is necessary to have a variable measuring instrument, namely Study instrument is a tool used by Studyers in collecting data. According to Booth (1987) "in quantitative Study, data analysis is an activity after data from all respondents has been collected."

### 1. Data Normality Test

The normality test is used to test whether the data is normally distributed or not. The normality test was given to the experimental class and the control class. In this study, normality testing was carried out using the SPSS 23 for windows program, using a significant level of 5%, if significant was obtained  $\geq 5\%$ , then the sample came from a normally distributed population.

### 2. Homogeneity Test

Homogeneity test was carried out to find out whether the data in the experimental class and control class were homogeneous. If the data obtained is homogeneous, then the analysis of homogeneity test data is carried out. After carrying out the normality and homogeneity tests, the next step is to carry out a t-test analysis to determine the effect of the Quantum Teaching learning model supported by the media

Flip Chart on the ability to describe the appearance of the earth's surface in the surrounding environment in Third-grades students using the SPSS 23 for windows

program.

## RESULT & DISCUSSION

After the normality test and homogeneity test were carried out, the results of the data were normal and homogeneous. The next step, the Studyer conducted a sample t-test, aiming to determine whether there was any influence before using the model and media with the Quantum Teaching model supported by Flip Chart media on the ability to describe the appearance of the earth's surface in the surrounding environment. The t-test analysis used in the Paired Sample t-test used the SPSS program computer services.

1) The Quantum Teaching model supported by Flip Chart media influences the ability to describe the appearance of the earth's surface in the surrounding environment. Based on the table above, the t count is 6.706 and for the t table,  $df = n - 1 = 20 - 1 = 19$  with t count  $6.706 >$  a significant level of 5%, namely 2.093, which means the significance level is 0.000 ( $<0.005$ ). So the results of the t test analysis using the Quantum Teaching model supported by Flip Chart media have a significant effect on the ability to describe the appearance of the earth's surface in the surrounding environment (Ratnasari et al., 2022).

2) The Quantum Teaching model without the support of Flip Chat media affects the ability to describe the appearance of the earth's surface in the surrounding environment. Based on the table above, the t count is 3.929 and for the t table,  $df = n - 1 = 20 - 1 = 19$  with t count  $3.929 >$  5% significance level, which is 2.093, which means the significance level is 0.001 ( $<0.005$ ). So the results of the t test analysis using the Quantum Teaching model without the support of Flip Chart media have no significant effect on the ability to describe the appearance of the earth's surface in the surrounding environment (Jiang, 2021; Mustaghfiroh, 2020).

3) There is a difference in the effect of the Quantum Teaching Model supported by Flip Chart media and the Quantum Teaching model without the support of Flip Chart media on the ability to describe the appearance of the earth's surface in the surrounding environment.

Based on the table above, the results of

the t table for a significant level of 5% and degrees of freedom (df) 38 are obtained ttable (2.024). From the calculation results, the tcount obtained is (3.886) greater than the ttable value of 5% (2.024) and Sig (2-tailed)  $0.000 < 0.005$  thus  $H_0$  is rejected, meaning that there is an average difference between the two groups (experimental class and control class). The mean difference (mean difference) is 15,750 and the difference ranges from 7,544 to 23,962 (based on the average of the experimental group 86.75 and the average of the control group 71.00) can be seen based on the results of the post-test.

Through the results of the post-test it can be seen that the average score of students who use the Quantum Teaching model supported by Flip Chart media is higher than the average score of students using the Quantum Teaching learning model without the support of Flip Chart media. This shows that the use of Quantum Teaching learning media supported by Flip Chart media has a good influence on students' ability to describe the appearance of the earth's surface in the surrounding environment (Berland & McNeill, 2010; Grm, 2014).

## CONCLUSION

Based on the results of the analysis and hypothesis testing, it can be concluded that the Study findings are as follows:

1. There is an influence of the Quantum Teaching model supported by Flip Chart media on students' ability to describe the appearance of the earth's surface in the surrounding environment in Third-grades SDN Tenaru
2. There is an influence of the Quantum Teaching model without the support of Flip Chart media on students' ability to describe the appearance of the earth's surface in the surrounding environment in Third-grades SDN Tenaru
1. There is a significant influence between the use of the Quantum Teaching model supported by Flip Chart media and the use of the Quantum Teaching model without the support of Flip Chart media on the ability to describe the appearance of the earth's surface in the surrounding environment in Third-grades students of SDN Tenaru.

## REFERENCES

- progression for scientific argumentation: Understanding student work and designing supportive instructional contexts. *Science Education*, 3(3), 67–78. <https://doi.org/10.1002/sce.20402>
- Booth, E. O. (1987). Studier as Participant: Collaborative Evaluation in a Primary School. *Education and Urban Society*, 20(1), 55–85. <https://doi.org/10.1177/0013124587020001007>
- Darmadi, H. (2018). *Pengantar Pendidikan; Suatu Konsep Dasar, Teori, Strategi dan Implementasi*. Alfabeta.
- dkk Sadiman, A. S. (2011). *Media Pendidikan: Pengertian, Pengembangan, dan Pemanfaatannya*. Rajawali Press.
- Grm, K. S. W. (2014). The self-evaluation of slovenian prospective Chemistry teachers' progress during their practical pedagogical training in primary schools. *Acta Chimica Slovenica*, 61(4), 729–739.
- Jiang, W. (2021). Applications of deep learning in stock market prediction: Recent progress. *Expert Systems with Applications*, 184. <https://doi.org/10.1016/j.eswa.2021.115537>
- Marcia, J. E. (2009). Education, Identity and iClass: From education to psychosocial development. *Policy Futures in Education*, 7(6), 670–677. <https://doi.org/10.2304/pfie.2009.7.6.670>
- Mustaghfiroh, S. (2020). Konsep “Merdeka Belajar” Perspektif Aliran Progressivisme John Dewey. *Jurnal Studi Guru Dan Pembelajaran*, 3(1 SE-Articles), 141–147. <https://doi.org/10.30605/jsgp.3.1.2020.248>
- Parra-González, M. E. (2020). Active and emerging methodologies for ubiquitous education: Potentials of flipped learning and gamification. *Sustainability (Switzerland)*, 12(2). <https://doi.org/10.3390/su12020602>
- Ratnasari, D., Gunayasa, I. B. K., & Saputra, H. H. (2022). Pengaruh model pembelajaran artikulasi terhadap keterampilan berbicara kelas IV pada mata pelajaran bahasa Indonesia. *Jurnal Renjana Pendidikan Dasar*, 2(1).
- Sewchuk, D. H. (2005). Experiential learning—a theoretical framework for perioperative education. *AORN Journal*, 81(6), 1311–1316. [https://doi.org/10.1016/S0001-2092\(06\)60396-7](https://doi.org/10.1016/S0001-2092(06)60396-7)
- Siregar, D. N. (2016). Emphasizing Morals, Values, Ethics, and Character Education in Science Education and Science Teaching. *The Malaysian Online Journal of Educational Sciences (MOJES)*, 5(2), 44–66.
- Sugiyono. (2016). *Metode penelitian kuantitatif kualitatif dan R&D*. Alfa Beta.
- Tomkins, L. (2016). ‘Oh, was that “experiential learning”?!’ Spaces, synergies and surprises with Kolb’s learning cycle. *Management Learning*, 47(2), 158–178. <https://doi.org/10.1177/1350507615587451>