The Effectiveness of Vak Models With Multimedia to Improve Social Science Learning Achievement

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Abstract. The objectives of this study were to: (1) described the steps of applying the visualization, auditory, kinesthetic (VAK) model with multimedia; (2) improved student learning outcomes; and (3) described the constraints and solutions of implementing the VAK model with multimedia in improving student learning outcomes. This Classroom Action Research (CAR) was carried out collaboratively and lasted for two cycles at SD Negeri 2 Tamanwinangun with a total of 27 students. Data analysis used was qualitative and quantitative analysis. The results of this study are the implementation of the VAK model with multimedia which is carried out according to the right steps to improve social studies learning outcomes with an average percentage of completeness in cycle I reaching 59.25% and in cycle II increasing to 86.68%. The constraints faced by researchers were: (a) teachers were still hesitant in applying the VAK model; (b) students are less active in learning; (c) students have difficulty in solving problems; and (d) students' responses have not touched on the content of the discussion. The solutions are: (a) providing VAK model training to teachers; (b) the teacher activates the students; (c) the teacher guides students to solve problems; and (d) the teacher guides students in providing responses.

Keywords: Visualization, Auditory, Kinestethic (VAK) models, Social Science Learning

1 Bakcground

Education is a human effort with full responsibility to guide students to develop their potential to gain intelligence and equip students with various skills, attitudes, and behaviors. This shows that in education it is not only for gaining intelligence, but also for spiritual, self-control, personality, morals, and skills needed by themselves, society, nation and state so that students are able to think critically, socially, responsibly, and care. towards the nation and state.

One of the subjects that can make students critical, social, responsible, and caring for the nation and state is the subject of social science. Nurmahanani explains that Social Science is a subject that examines a set of events, facts, concepts, and generalizations related to social issues [1]. Besides, Susanto et al. argues that social science is science that is studied from several social and humanities disciplines whose activities are around humans which are scientifically packaged to deepen student knowledge at the primary and secondary levels [2]. Through the social studies subject, students are directed to become citizens of Indonesia who are democratic, responsible, as well as citizens of the world who love peace .

Learning that is meaningful and effective is highly dependent on students, the quality of the teacher, and the subject matter delivered [3]. An effective and meaningful learning atmosphere will be created if the teacher packages learning with models and media that are innovative, fun, and student-oriented. Therefore, the teacher should be able to choose a model and one that is in accordance with the material and student characteristics so that students are active and

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enthusiastic in learning. If students are active and enthusiastic in learning, learning will be fun and meaningful [4].

In connection with learning, there are many problems experienced by teachers and students in the learning process, especially in social studies subjects regarding technological developments, teachers have not used student-oriented models and media. The ongoing learning process still uses the lecture and question and answer method. This results in the activeness and enthusiasm of students in learning. Such conditions are currently experienced by students of SD Negeri 2 Tamanwinangun.

Students in these elementary schools are also difficult to organize and pay less attention to the teacher during the learning process. As a result, the results of the daily test scores on social studies subjects were less than satisfactory. Students who have not completed reach 46.15% or as many as 12 of 26 students. Responding to the above problems, the researcher tries to provide a solution by applying the visualization, auditory, kinesthetic (VAK) model with multimedia to improve student learning outcomes [5].

The VAK model is a learning model that optimizes three learning modalities, namely learning by remembering (visualization), learning by listening (auditory), and learning by motion or emotion (kinestethic) [6]. The steps for implementing the VAK model are (1) preparation; (2) delivery; (3) training; and (4) display of results. The researcher also refers to the steps proposed by Ismail et al., Santhi et al. and Rose & Nicholl, which are then summarized into four steps as mentioned above [5-7].

The VAK model facilitates students by giving students the freedom to use learning styles according to the characteristics of different students. The characteristics of fourth grade elementary school students in accordance with Piaget's opinion are that students aged 7-11 are at the concrete operational stage [4]. At this stage, the student's curiosity is strong and the functions of memory, imagination, and thought begin to develop. To improve students' story listening skills, researchers combined the VAK model with multimedia. Multimedia can be interpreted as various types of media that are used sequentially to present information. In this study, researchers used multimedia in the form of power points or presentation media, instructional videos, and role playing included in interactive multimedia. Mahmudah argues that multimedia comes from Latin, namely multi and media. Multi means a lot, while the media is an intermediary or something that is used to convey or carry something [6].

From the description above, the problems in this research can be broken down, such as: (1) how to apply the steps of the VAK model with multimedia in improving social studies learning outcomes about technological developments in fourth grade students of SD Negeri 2 Tamanwinangun?; (2) can the application of VAK model with multimedia improve social studies learning outcomes regarding technological developments in fourth grade students of SD Negeri 2 Tamanwinangun for the; and (3) what are the obstacles and solutions to the application of the Visualization Auditiry Kinesthetic (VAK) model with multimedia social studies learning outcomes regarding technological developments?

2 Research Methods

This research was conducted at SD Negeri 2 Tamanwinangun which is located on Jalan Kejayan No.1 Tamanwinangun, Kebumen District, Kebumen Regency. The subjects of this study were the fourth grade students at the SD with 27 students consisting of 15 female students and 12 male students.

The research approach used was classroom action research (CAR) which was carried out collaboratively with class teachers, in which the class teacher acted as the implementer of the action and the researcher was the observer assisted by peers. According to Mulyasa, CAR is a

series of activities that contain the process of observing the teaching and learning of a group of students by bringing up a deliberate action by the teacher as a process of improvement and improving the quality of teaching and learning [6].

Data collection tools in this study were in the form of test instruments, namely evaluation sheets and non-test instruments in the form of observation sheets, interview guidelines, and documentation. Observation sheets were used to observe teacher and student activities in learning, while interviews and documentation were used to strengthen the data in this study. The data analysis used in this research is qualitative and quantitative data analysis. Qualitative data analysis in this study according to Miles and Huberman (in Sugiyono), includes data reduction, data presentation, and drawing conclusions [8].

The data obtained in this study will be tested for validity by using triangulation techniques. Triangulation is a method used to obtain accurate and reliable information using various methods so that researchers are not wrong in making decisions [6]. The triangulation used was source triangulation and technique triangulation. Source triangulation in this study combines data from observers, class teachers, and students, while technical triangulation combines data obtained from test techniques, observation, interviews, and documentation.

The determined performance indicators are the implementation of learning that applies the VAK model with multimedia in social studies learning about the development of story technology reaching 85% and student responses to the application of the VAK model with multimedia reaching 85% which is measured through the observation sheet. Learning outcomes are also targeted to reach 85% with KKM 75 which is measured through evaluation results.

This research was conducted in two cycles consisting of two meetings in each cycle. In accordance with Arikunto's opinion, the research procedure in collaborative CAR includes four stages [9], namely (1) planning; (2) implementation; (3) observation; and (4) reflection.

3 Results and Discussion

The research was conducted with the initial step of creating scenarios and lesson plans that were adjusted to the curriculum in schools. The analysis of the learning process that applies the VAK model with multimedia to teachers and students in cycles I and II can be seen in the following diagram.

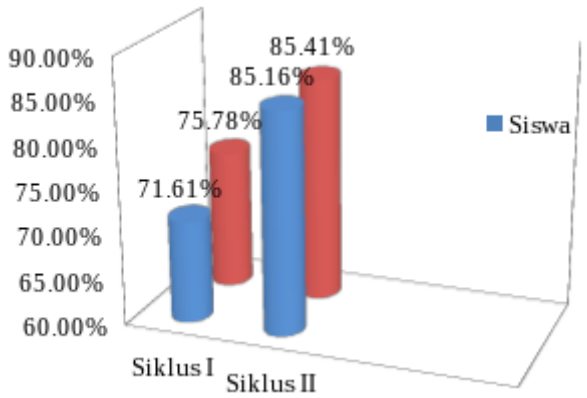

Figure 1. Results of Observations of Teachers and Students in Cycles I and II

If seen from the Figure 1, the application of the VAK model with multimedia through the steps of preparation, delivery, training, and appearance of the results of each cycle always increases. Based on the table above, the results obtained in cycle I were 75.78% and 71.61%, and in cycle II increased to 85.41% and 86.16%.

The increase can be seen from the students' activities in learning. Students are more active so that learning outcomes gradually increase. In addition, the teacher as a facilitator is also increasingly paying attention to the needs of students and trying to fulfill them. The VAK model optimized three learning modalities, namely learning by remembering (visualization), learning by listening (auditory), and learning by motion or emotion (kinestethic) [10-11].

In addition to the observation results, the following is the increase in student evaluation test results in learning through the application of the VAK model with multimedia in cycles I and II.

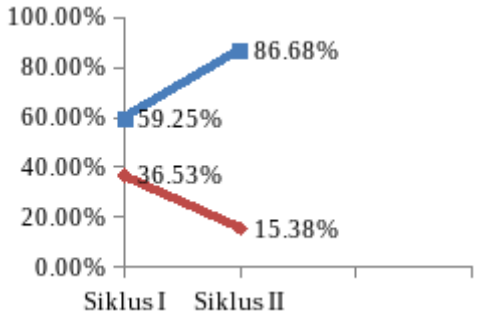

Figure 2 Graph of the Improvement of Social Studies Learning Outcomes in Cycles I and II

Based on the Figure 2, it can be seen that there was a significant increase in the percentage of student completeness from 59.25% to 86.68%. This percentage has also reached the targeted performance indicators. Based on the description above regarding the analysis of the application of the VAK model steps with multimedia to teachers and students and student learning outcomes in cycles I and II, it can be concluded that both the learning process and student learning outcomes always experience improvement. Chandra argued that VAK type Quantum Learning Model with Audio Visual Media can improve the Quality of Science Learning for 5th Grade Hj. Isriati Baiturrahman Elementary School [11].

There some evidence happened when learning process. First, the speakers to be used are damaged, so that students are not very clear to hearing the sound from the video. Second, teacher does not guide students in making conclusions on the results of group discussions. Third, students are less active in providing responses. Forth, students do not have the courage to ask questions. Fifth, students have not been able to conclude the results of the discussion. Lastly, the responses submitted by students have not yet touched on the content of the discussion [10].

There some solutions to reducing the problems. Teacher using a good speakers. Next, the the learning scenario were revised and re-explain. Then, teachers provide motivation, stimulates students to ask questions. Besides, theacher monitored answers and direct responses to discussion content.

There are several common obstacles faced by researchers and Ocepek et al. [12]. Students are not confident in asking questions and students are noisy during kinesthetic activities. The weakness of the VAK model according to Chandra also found in this study [11]. The implementation of the VAK model with multimedia takes longer, so not all students have the opportunity to play roles.

Based on the explanation above regarding the results of teacher and student observations, student learning outcomes, and the obstacles that still arise in cycles I and II, it can be concluded that the application of the VAK model with multimedia can improve student learning outcomes. The results in this study reinforce Herdian's (in Shoimin) opinion which states that learning will be effective if the three learning style modalities (visualization, auditory, kinesthetic) are utilized and developed according to the potential of the students [5-6][13]. Evidenced by student learning outcomes that always increase by applying a model that facilitates students with these three modalities. The results of this study are also in line with research conducted by Singaravelu which states that the use of multimedia is more effective than conventional learning methods [10].

4 Conclusions

The application of the visualization, auditory, kinesthetic (VAK) model with multimedia can improve learning outcomes for fourth grade students of SD Negeri 2 Tamanwinangun. This is evidenced by the increase in student learning outcomes in each cycle. Student learning outcomes in the first cycle reached 59.25%, in the second cycle increased to 86.68%. Based on the constraints that appeared, the solutions applied were (1) using speakers that were not damaged; (2) the researcher re-explains the learning scenario; (3) teachers provide motivation and rewards to students; (4) the teacher stimulates students to ask questions; (5) provide motivation and construct students' understanding; and (6) monitoring answers and directing responses to discussion content.

Furthermore, teachers should used the VAK model with multi-media as an alternative teacher to improve student learning outcomes and improve teaching skills by designing an interesting and fun learning process. Then, schools should provide completed learning facilities to improve the quality of learning by applying innovative learning models and media.

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