



# Talking Stick Learning Model Assisted with Audiovisual Media Toward Science Knowledge Competence

\* I Wayan Windu Phalguna<sup>1</sup>, DB. Kt. Ngr. Semara Putra<sup>2</sup>

<sup>1,2</sup> Program Studi Pendidikan Guru Sekolah Dasar, Universitas Pendidikan Ganesha, Singaraja, Indonesia

## ARTICLE INFO

### Article history:

1 September 2020  
Received in revised form  
11 Oktober 2020  
Accepted 1 November 2020  
Available online 20  
November 2020

### Kata Kunci:

Talking Stick, Audio  
Visual, IPA

### Keywords:

Talking Stick, Audio visual,  
Science Knowledge

## ABSTRAK

Rendahnya kompetensi pengetahuan IPA siswa yang disebabkan oleh kurang optimalnya penggunaan model pembelajaran yang inovatif serta kurangnya penggunaan media pembelajaran. Tujuan dilaksanakan penelitian ini untuk menganalisis pengaruh yang signifikan model pembelajaran *talking stick* berbantuan media *audio visual* terhadap kompetensi pengetahuan IPA Kelas IV SD. Jenis penelitian ini merupakan eksperimen semu dengan desain penelitian *non-equivalent control group design*. Sampel dalam penelitian ini menggunakan Teknik *Cluster Random Sampling* yaitu kelas IV SDN 4 dengan sebanyak 34 siswa sebagai kelompok eksperimen serta kelas IV SDN 3 sebanyak 32 siswa sebagai kelompok kontrol. Populasi dalam penelitian ini yaitu seluruh siswa kelas IV SDN sebanyak 160 siswa. Pengumpulan data kompetensi pengetahuan IPA dilakukan dengan metode tes dan instrumen yang digunakan berupa tes objektif pilihan ganda biasa. Data

dianalisis menggunakan uji-t. Berdasarkan hasil analisis data nilai  $t_{hitung} = 4,377$  sedangkan pada taraf signifikansi 5% dan  $dk = 64$  nilai  $t_{tabel} = 1,997$  sehingga  $t_{hitung} = 4,377 > t_{tabel} = 1,997$ . Berdasarkan kriteria pengujian, maka  $H_0$  ditolak dan  $H_a$  diterima. Terdapat perbedaan yang signifikan kompetensi pengetahuan IPA antara kelompok kontrol serta kelompok eksperimen. Rata-rata kompetensi pengetahuan IPA siswa kelompok eksperimen dan kelompok kontrol yaitu  $0,56 > 0,35$ . Jadi dapat disimpulkan, model pembelajaran *Talking Stick* berbantuan media *audio visual* berpengaruh terhadap kompetensi pengetahuan IPA kelas IV SD.

## ABSTRACT

The low competence of students' science knowledge is caused by the lack of optimal use of innovative and creative learning models and the lack of instructional media use. The purpose of this research is to find out the significant influence of the talking stick model assisted by audiovisual media on the science knowledge competence of fourth-grade elementary school students. The type of this study was a quasi-experimental research with the nonequivalent control group design. The samples in this study were determined using the Cluster Random Sampling. The population in this study is all students in grade IV elementary school are 160 students. The data of science knowledge competence were collected using the test method, and the instrument used was an ordinary multiple-choice objective. The data were analyzed using t-test. Based on the result of data analysis, the value of  $t_{count}=4,377$  while at the significant level 5% and  $dk = 64$   $t_{table}=1,997$  so that  $t_{count}=4,377 > t_{table} = 1,997$ . Based on the testing criteria, then  $H_0$  was rejected and  $H_a$  was accepted. There were significant differences in the science knowledge competence between the experimental group and the control group. The average of science knowledge competence students in the experimental group and control group was  $0,56 > 0,35$ . It can be concluded that the Talking Stick model assisted by audiovisual media influences the science knowledge competence in the fourth-grade students of elementary school.

## 1. Introduction

The 2013 curriculum is a curriculum that is currently set and implemented by the government as a guideline for implementing the learning activity process. The 2013 curriculum is an innovation in the renewal of an educational paradigm shift, originally a teacher-centered learning process to a student-centered learning process (Amanda, 2017). Natural science, or often referred to as science education, is abbreviated as IPA. Science is one of the main content in Indonesia's education curriculum, including at the elementary school level. Natural Science is one of the competencies that need to developed to form and prepare quality, superior, and competitive human resources. Science is a science that focuses on studying nature or science related to nature. Science is learning based on principles and processes in which students can develop scientific attitudes towards scientific concepts (Astuti, 2017). Science is a scientific discipline that deals with nature in an integrated manner. It is a mastery of knowledge in the form of concepts, principles, and facts but science is related to the discovery process (Yanti, 2017). Science in elementary schools can train students' understanding of the use of simple technology devices when solving problems related to nature (Adnyana, 2017). Learning the content of natural science material in elementary schools should open opportunities to cultivate students' curiosity scientifically, develop the ability to seek answers based on the evidence found, and develop scientific thinking (Astuti, 2017). However, the content of science material is considered difficult by most students starting at the primary and secondary school levels. Due to the very dense learning material and the limited learning media or learning support tools used by the teacher, students tend to be bored with learning because of the process. Learning is menoton (Candra, 2017). In line with Barus's (2019) opinion, which states other obstacles experienced by students, such as the large number of science material that is difficult to understand because the material content described is still abstract, so science learning is considered difficult and boring.

Science learning should make students active in the process of learning activities in class and make students discover independently about the material they are learning. Learning activities prioritize student-centered learning processes and teachers only as facilitators. However, this is inversely proportional to where the process of learning activities takes place. The teacher is more dominant than the students, so the learning process is more teacher-centered, but students only become listeners. When learning activities occur, the use of various learning models and media is not optimal that is applied by the teacher to explain a subject matter. Still, the teacher tends to review the learning material orally to feel confused and not interested in following the learning process. Lack of application of learning innovations used by teachers during the learning process is one factor that cause students to become passive in participating in the learning process (Tarigan, 2017). It causes students to feel bored when receiving learning material, and students have not fully understood the learning material that has been described by the teacher. The science learning process in class generally tends to be taught conventionally. Students only receive learning through the teacher's lecture method without any interaction between teacher and students (Devitasari, 2019). It is in line with Arsani's (2018) opinion, which states that conventional learning is passive because learning is only more teacher-centered. In this case, in conventional learning, students can be passive because the activities carried out are only sitting, listening and taking notes and not easy for the teacher. To find out firsthand the difficulties experienced by students in learning because it delivers unidirectional material. In addition, science material is a material that has an important role in the provision of student life in society. If the learning process in the class of students only accepts material using the lecture method, it makes students lack creativity in the learning process (Putri, 2018).

This problem also occurs in the Singakerta Cluster Elementary School, Ubud District. The process of learning science activities has not been as expected because science learning has not been maximized. It evidenced by the results of observations and interviews obtained from the school principal and all fourth-grade homeroom teachers at SD Gugus Singakerta, Ubud District. When carrying out the learning, there were problems precisely in the content of science material. It is evidenced by the mid-semester I assessment results on the content of science material, namely that there are still many students who have not met the KKM. For competency knowledge on the content of science material obtained from the first half-semester assessment, which is presented in table 0.1 as follows.

**Table 01.** Score of PTS IPA SDN Singakerta, Ubud

No.	School Name	Grade	KKM	The number of students	The number of students below KKM	The number of students above KKM
1.	SDN 1 Singakerta	IV	70	22	12	10
2.	SDN 2 Singakerta	IV	70	19	11	8
3.	SDN 3 Singakerta	IV	70	32	25	7
4.	SDN 4 Singakerta	IV	70	34	24	10
5.	SDN 5 Singakerta	IV	70	23	14	9
6.	SDN 6 Singakerta	IV	70	30	17	13
Total				160	103	57

When the learning process in the classroom in the delivery of learning material too often uses assignment, lecture and question and answer methods and has not optimally used. Learning models and media results in students being less interested in participating in learning so that the material described by the teacher cannot be understood. When researchers carried out observations, many science learning activities were carried out using conventional learning models. Conventional learning is a method used in explaining material in the class where learning only focuses on the teacher and causes students to become inactive in learning activities (Dewi, 2018).

To make a pleasant learning atmosphere, it is necessary to have a learning process by applying learning models and media to make students active in every learning process. Dewi (2018) states that in choosing a learning model and learning media, it is necessary to adjust students' characteristics so that the learning process can attract students' interest in learning. From this statement, the Talking Stick learning model applied. The talking stick learning model is a learning model that can be used as an alternative for teachers to provide a fun learning in class with a stick's help (Apriyanti, 2017). This is in line with the opinion of Trisnawati (2017) that the talking stick learning model is where the implementation stage when teaching and learning activities in class refer to being able to create pleasant learning conditions through the nuances of the game from a stick that is passed alternately after the teacher exposes the subject matter. Then proceed with suggesting questions to students provided that the student who holds the stick has a chance to answer.

In the process of learning activities by applying the talking stick, the learning model can make students more active in learning, build cooperation between group members, test students' readiness in the mastery of learning material so that students become more active in learning and students are more focused on when the learning process takes place because students do not know when the stick stops in turn. Murtiningsih (2017) states that as for the advantages of the talking stick learning model, namely: First, testing the readiness of students, by using a stick during the learning process, this will make it difficult for students to know who has the last stick. Because in learning using the talking stick model, the student holding the last stick will get questions from the teacher. It directly allows students to prepare themselves with questions raised by the teacher. Second, to make students more active in learning, before being invited to do learning activities using the talking stick model, they are encouraged to understand the material taught first. Students expected to be better prepared to do learning using the talking stick model by understanding the previous material by studying hard. Third, the learning atmosphere is fun. In its implementation, the talking stick learning model has several stages or is commonly called the syntax model, Anisa (2017), namely: First, the teacher prepares a stick measuring 20 cm. The teacher delivers the learning material. Second, give students about 20 minutes to understand the learning that has been explained by the teacher. Third, instruct students to close the book. The teacher takes the stick, then hands it over to one of the students, and then gives a question provided that the student who gets the stick must answer after the stick has been rotated, and so on so that all students get the answer. Fourth, after all, students have had their turn to answer, the teacher guides both individuals and groups' conclusions, evaluates and closes the lesson.

When combined with learning media, the talking stick learning model will make lessons more effective and optimize the applied model. This is in line with Anggara's (2018) opinion, which states that learning media are anything that can be used to transmit messages (learning materials) so that they can stimulate student attention, interest, thoughts, and feelings of learning in learning activities to achieve certain learning objectives. The quality of education will not be optimal if it is not supported by learning media as an intermediary, making it easier to explain a subject matter (Karunia, 2017). One of the learning

media, combined with the talking stick learning model is audiovisual media. Audiovisual media has better capabilities because it consists of two elements, sound elements, and image elements (Suryani, 2017). Students are very enthusiastic about audiovisual media because this media can be observed, heard, and experienced directly, and this media can create a meaningful impression in students (Saharuhin, 2018). In line with Kusuma's (2018) opinion, audiovisual media is a form of learning media that is cheap and affordable so that it used easily in explaining the subject matter to students. Rositayani (2018) states the advantages of using audiovisual media, namely, making it easier for teachers to explain complex material to simple ones, can be used classically or individually, and repeatedly. Audiovisual media's advantages are that they can display image elements and sound elements that can be seen and heard directly by students, attract students' attention, and audiovisual media can help writing and spoken words in conveying knowledge, attitudes, ideas in the material learning.

Theoretically, the Talking Stick learning model assisted by audiovisual media has an effective impact on learning success. Several relevant research results reinforce that the Talking Stick learning model assisted by audiovisual media positively impacts student learning success. First, Cahya (2017) states that the talking stick type of cooperative learning model assisted by image media improves fourth-grade elementary school students' social studies learning outcomes. , but there are differences with the media used, image media. Second, Irma (2017) states that audio media assist the talking stick type of cooperative learning model on social studies learning outcomes of third-grade elementary school students. Still, there are differences with the media used, namely audio media and social studies learning outcomes. Third, Anggraeni (2020) states that the talking stick learning model is assisted by question card media on the fourth-grade elementary school science knowledge competency. Still, there are differences with the media used.

From the explanation that has conveyed, it is necessary to carry out related research to increase students' insights about science that studies nature and improves science knowledge competence. Applying the Talking Stick learning model assisted by audiovisual media hoped to improve students' competency in science knowledge. So a study entitled "The Effect of the Talking Stick Learning Model Assisted by Audio Visual Media on the fourth-grade science competency of SD Singakerta, Ubud." Based on this description, the purpose of this study was to determine the significant influence of the Talking Stick learning model assisted by audiovisual media on the fourth-grade science competency of SD Gugus Singakerta, Ubud District. This study is different from existing research, this research innovates with the aid of audiovisual media. Applying this model and media, it hoped to solve the problems in SD Singakerta, Ubud.

## 2. Method

Dalam sebuah penelitian tentunya tidak terlepas dari rancangan penelitian yang dipakai. Penelitian ini memakai rancangan *quasi eksperimen* (eksperimen semu) beserta desain *nonequivalen control group design*. Ada dua kelas pada desain ini, yaitu kelas eksperimen serta kontrol. Sugiyono (2018) *quasi eksperimen design* (eksperimen semu) terdapat kelompok kontrol dan tidak memiliki fungsi secara penuh dalam mengendalikan variable asing yang mempengaruhi kelompok eksperimen. Hal ini dikarenakan kesanggupan peneliti dalam mengamati perilaku siswa yang tidak memungkinkan bila siswa tidak berada di sekolah.

In a study, of course, it cannot be separated from the research design used. This study used a quasi-experimental design (quasi-experimental) along with a nonequivalent control group design. There are two classes in this design, namely the experimental and control classes. Sugiyono (2018) quasi-experimental design (quasi-experimental) has a control group and does not fully control foreign variables that affect the experimental group. This is because researchers' ability to observe student behavior is not possible if students are not in school. Sugiyono, (2018) population is a subject that has been decided by the researcher to be the object of research. Then it is observed, studied, and obtained a conclusion. The population is a collection of objects, whether events, people, or the like, as a concern so that it is used as an observation in research (Setyosari, 2015). The study population were all fourth grade SD Gugus Singakerta, Ubud District, Academic Year 2019/2020, including six classes and six existing SD and a total of 160 students. After determining the research population, the next step is to determine the sample. Setyosari (2015) sample is part of a predetermined population. In the study, the sample was taken to be the data source, wincludingthe experimental and control classes. The sample taken using the cluster random sampling technique. In sample selection, the randomization of the class was not randomized to individuals. Before selecting the class to be sampled, the first thing to do is to do a raffle by recording the names of all fourth-grade elementary schools in the Singakerta Elementary School, Ubud, on six sheets of paper and then rolled up and put in a box then shuffled. After the drawing carried out, two classes

assigned as the sample class. The two samples selected as fourth-grade SDN 4 Singakerta and class IV SDN 3 Singakerta. Then the two samples were given a pretest to determine group equality. If the pretest data had sufficient criteria for the normality test and the homogeneity test, the equivalence was analyzed using the t-test.

The t-test analysis found that the two samples stated to be equivalent to the analysis  $t_{count} = 1.237$  and  $t_{table} = 1.997$  at a significance level of 5% (0.05) with  $dk = (34 + 32 - 2) = 64$ . The equivalence test conducted, it found that  $t_{count} = 1.237 < t_{table} = 1.997$  so  $H_0$  is accepted so that the two sample groups are equal. After the two equal groups continued to carry out the draw again in obtaining the experimental and control classes, the results of the drawing were obtained that the fourth grade SDN 4 Singakerta appeared first as an experimental class that was given the Talking Stcik learning model assisted by audiovisual media and the fourth-grade SDN 3 Singakerta appeared second as the control class who learn with conventional learning.

In the research carried out, the data collection method used in collecting data was the science knowledge competency instrument in the form of a regular multiple-choice objective test collected through tests. Yusuf (2015) test is a structured way to estimate a person's behavior, is objective, and can described with the help of numbers, scales, or a category system. A test is a tool to measure and measure it according to the desired objectives by following the applicable regulations (Arikunto, 2015). The objective test of ordinary multiple-choice, amounting to 50 items per question, is accompanied by four alternative answers chosen by the student (alternatives a, b, c, or d). Each item was given a score of one if the student answered correctly (the answer is matched with the answer key) and a zero score for students who answered incorrectly. Of the 50 items, some indicators guided by the Natural Science cognitive competencies, consisting of C1, C2, C3, and C4. The preparation of tests based on basic competencies (KD) and indicators following the subject matter. The KD and indicators used for the preparation of research instruments presented in table 02 below.

**Table 02.** Compilation of Basic Competencies and Indicators of Science Knowledge Competency Instruments

Basic Competencies (KD)	Indicator	Cognitive Type
Comparing the life cycles of several types of living things and relating them to their conservation efforts	Give examples of living things undergoing a perfect and imperfect metamorphosis	C1
	Describe the life cycle of living things around	C2
	Arrange the stages of the life cycle of living things	C3
	To determine the characteristics of perfect and imperfect metamorphosis	C4
	Mention efforts to conserve living things	C1
	Distinguish the life cycle of several types of living things	C2
	Explain the benefits of living things for the environment	C2
	Give examples of efforts to conserve living things	C2
	Identify ways of preserving living things in the environment	C4

After compiling the research instrument, the next step is to test the instrument to obtain an empirical description of the instrument's feasibility. Before the instrument tested, content validity and theoretical validity carried out first, then 50 items are tested. The content validity test was carried out by direct testing the judges. In contrast, the test item validity test tested using the validity test, the distinguishing power test, the difficulty level, and the reliability test. Based on the instrument's test results, from the 50 test items that have tested, 30 test items meet the requirements. So, the instrument used in this study has been validated and classified as reliable.

The data analysis method used is descriptive statistics and inferential statistics. Descriptive statistics used to analyze data by describing or describing the collected data are descriptive statistics in

the form of mean (mean), standard deviation, and variance. Meanwhile, inferential statistics used to test the proposed hypothesis through the pooled variance t-test. However, before the t-test carried out, it must first fulfill the prerequisite test of analysis, namely the normality test of the data distribution using the Kolmogorov-Smirnov test and the variance homogeneity test the F test (Fisher).

### 3. Result and Discussion

The data obtained in this study grouped into two: (1) the competence of scientific knowledge of students who took part in learning using the audiovisual assisted Talking Stick learning model and (2) the competence of scientific knowledge of students who took conventional learning. Both samples were given treatment six times in the experimental class and six times in the control class. At the end of the study, a posttest given. The following are the post-test scores of the experimental and control groups, which presented in the following data description table.

The average posttest score for the competency of science knowledge in the experimental group is  $\bar{X} = 0.56$ , Standard Deviation = 0.16812, and Variance = 0.02826. While the average posttest score for the competency of science knowledge in the control group is  $\bar{X} = 0.35$ , Standard Deviation = 0.1331, Variance = 0.01771. After obtaining the normalized score gain data competence in science knowledge, the experimental and control groups collected. The next step is to conduct a prerequisite test which includes a data distribution normality test and a variance homogeneity test. The data normality test used the Kolmogorov-Smirnov test. The test criteria are at the 5% significance level if the maximum value is  $|FT - FS| \leq$  Kolmogorov-Smirnov table value, then the data is normally distributed. Conversely, if the maximum value of  $|FT - FS| >$  Kolmogorov-Smirnov table value, then the data is not normally distributed. While the homogeneity test of variance carried out on student data of the experimental group and the control group using the F test with the criteria for testing the value of  $F_{count} < F_{table}$ , so the data on the competence of science knowledge of the experimental group and the control group had homogeneous variance.

Based on the experimental group's analysis, the value of  $|Ft-Fs|$  the maximum is 0.078. Maximum value  $|Ft-Fs|$  This used as a data distribution normality test number with a significance level of 5% for  $n = 34$ , the Kolmogorov-Smirnov table value is 0.227 so that the comparison of the  $|Ft-Fs|$  The maximum  $\leq$  value of the Kolmogorov-Smirnov table is  $0.078 < 0.227$ , meaning that the distribution of experimental class data is normally distributed. Meanwhile, the control group obtained the value of  $|Ft-Fs|$  the maximum is 0.089. This value used as a data distribution normality test number with a significance level of 5% for  $n = 32$ , the Kolmogorov-Smirnov table value is 0.234 so that the comparison of the value  $|Ft-Fs|$  The maximum  $\leq$  value of the Kolmogorov-Smirnov table is  $0.089 < 0.234$ , meaning that the distribution of control class data is normally distributed. Based on the results of the homogeneity test, the  $F_{count} = 1.60$  was obtained. The value of  $F_{table}$  for a significance level of 5% with  $dk$  numerator = 33 and  $dk$  denominator = 31 which is 1.799 so that the ratio  $F_{count} < F_{table}$  is  $1.60 < 1.799$ . Following this test, the experimental and control class data have homogeneous variances.

The prerequisite test results, itfound that two groups of samples are normally distributed and have homogeneous variances, so it can continued to test the hypothesis with the t-test technique. Criteria for testing if the value of  $t_{count} \leq t_{table}$  then  $H_0$  is accepted and  $H_a$  rejected, and if the value of  $t_{count} >$   $t_{table}$  then  $H_0$  is rejected and  $H_a$  is accepted. At the 5% significance level with degrees of freedom  $n_1 + n_2 - 2$ . The hypothesis tested in this study is  $H_0$ : There is no significant difference in science knowledge competencies between the groups that are taught using the Talking Stick learning model assisted by Audio Visual media and the groups that are taught using learning in the fourth grade of the Singakerta Cluster Elementary School, Ubud District, Academic Year 2019/2020.

Based on the analysis using the t-test, it was found that  $t_{count} = 5.769$ , then compared it with the  $t_{table}$  value with  $dk = 64$  at the 5% significance level = 1.997. Because  $t_{count} = 5.769 >$   $t_{table} = 1.997$ , the hypothesis states that there is a significant difference in the competence of science knowledge of the groups taught through the Talking Stick learning model assisted by Audio Visual media and groups taught using conventional learning in the fourth grade of SD Gugus Singakerta, Ubud District, Academic Year 2019/2020 . The following factors influenced the existence of differences in competence in science knowledge between the groups that were taught using the Talking Stick model assisted by Audio Visual media and the groups that were taught using conventional learning.

First, the Talking Stick learning model has an impact on the competence of scientific knowledge because the talking stick learning model at the implementation stage is assisted by a stick that is rotated from one student to another, where the rotating stick is used as a quota in expressing opinions or conveying ideas without any fear. In the process of learning activities, students tested for their readiness in mastering the learning material so that students are more active in learning and students are more focused when the learning process takes place because students do not know when the stick stops in turn

and indirectly students can build and generate an attitude of cooperation between group members in solving problems given by the teacher. This makes the knowledge obtained by students not in the form of memorization but meaningful knowledge. Students are not quickly forgotten and have a positive impact on learning outcomes, especially on knowledge competencies. Following the opinion of [Janayanti \(2017\)](#), the talking stick learning model provides an opportunity for all students to convey their thoughts on the problems posed by the teacher. This model can create a class atmosphere that is more enjoyable and more lively because all students will have a turn to answer questions from teachers and train students in thinking and speaking in class discussions. It is in line with [Muhamad \(2017\)](#), who stated that the talking stick model is a strategy that can spur students to understand the material carefully, physically and mentally ready during the teaching and learning process in class to increase students' confidence in solving existing problems. The talking stick learning model is a learning model that can provide full opportunities for students to explore their knowledge and express ideas or opinions that exist within themselves and train students to be active in learning activities because the talking stick learning model has advantages in the learning process. [Apriyanti \(2017\)](#) states the advantages of applying the talking stick learning model in the learning process: it generates motivation and enthusiasm for students to participate in learning and makes it a challenge for students so that all members in the group can express their opinions or ideas.

Second, because of the use of audiovisual media. Audiovisual media also has a positive influence on the competence of science knowledge because in the use of audiovisual media, the learning process is initially boring and results in students being bored in participating in learning to be interested and enthusiastic in participating in the learning process. It agrees with [Wijayanti \(2017\)](#) that audiovisual media is a tool that involves the sensory system, especially hearing and vision, which presented simultaneously when communicating information so that it can attract students' attention in participating in learning activities. [Dewi \(2018\)](#), audiovisual media contains an integrated image and sound elements so that the information conveyed can attract students' attention and make it easier for students to understand a concept and be applied in learning activities or everyday life. The learning process with audiovisual media can help students understand a abstract concept so that it is easy to understand and easy to remember in their minds. Audiovisual media is a medium and the changing times because it is a medium that can show visualized sound and illustrations. The learning process using audiovisual media provides a new atmosphere for students to impact student activity and enthusiasm for learning. This is in line with [Prayudi \(2017\)](#) research, which states that with the assistance of audiovisual media, it can help students in the learning process to attract students' attention and motivate students to learn.

Third, the combination of implementing the talking stick learning model assisted by audiovisual media has an impact on science learning. In the process of learning activities by applying the talking stick learning model assisted by audiovisual media can make students more active in learning, build cooperation between group members, test students' readiness in mastering learning material so that students become more active in learning and students are more focused when the process of learning activities takes place because students do not know when the stick stops in turn. The talking stick learning model is fun because, in its application, it inserts an element of playing stick scrolling accompanied by a song. When the teacher gives instructions to stop singing, the rolling stick stopped so that the atmosphere of learning activities in the classroom becomes lively and not boring. And supported by the help of audiovisual media in the explanation of learning materials can make it easier for students to understand the content of the subject matter and attract students' attention to increase student motivation and interest in learning in the learning process. [Wedanti \(2017\)](#) learning with a talking stick strategy encourages students to have the courage to have an opinion and become an alternative to achieve the goals of science learning, including encouraging students to work together with one group member, developing their potential, and being able to increase students' knowledge competencies and have an impact positive.

This study's results also reinforced by [Meileni \(2017\)](#) research, which states that the talking stick learning model assisted with crossword puzzles affects the interest and learning outcomes of fourth-grade elementary school students. [Ayuni \(2017\)](#) states that the talking stick learning model assisted by question box media affects fifth-grade science learning outcomes. [Lidia \(2018\)](#) states that the talking stick learning model affects fourth-grade students' social studies learning outcomes. [Megita \(2019\)](#) states that the talking stick learning model assisted by national songs affects the fifth-grade students' competency in science knowledge. And research conducted by [Septina \(2018\)](#) states that the talking stick learning model assisted with slides can improve communication skills and civics learning outcomes for fourth-grade students.

The difference in the results of competency in scientific knowledge can be seen from the learning process carried out on the two sample groups, the results of hypothesis testing, and is seen based on the

mean scores in the two groups. This explanation stated that the Talking Stick learning model assisted by audiovisual media affected the fourth-grade science competency of SD Singakerta, Ubud, Academic Year 2019/2020.

#### 4. Conclusion

The hypothesis test analysis results that have carried out, the following conclusions can made. The average score of competency in the group's scientific knowledge taught with the Talking Stick model assisted by audiovisual media was higher than that of the group taught using conventional learning. The group that taught through the Talking Stick model assisted by audiovisual media had an average of 0.56, and the group that taught conventionally had an average of 0.35. The hypothesis test results with the t-test obtained  $t_{count} = 5.679$  at the significance level with  $dk = 64$  obtained  $t_{table} = 1.997$ . Therefore  $t_{count} = 5,679 > t_{table} = 1,997$ ,  $H_0$  rejected, and  $H_a$  accepted, which states that there is a significant difference in the competence of science knowledge between groups of students who taught with the Talking Stick learning model assisted by Audio Visual media and groups of students who are taught conventional learning in fourth-grade elementary school Singakerta Group, Ubud sub-district for the 2019/2020 academic year. The difference is due to the influence of the Talking Stick learning model assisted by audiovisual media. It can concluded that there is a significant influence on the Talking Stick learning model assisted by audiovisual media on the fourth-grade science competency of SD Gugus Singakerta, Ubud District, Academic Year 2019/2020. Suggestions that can be submitted are that teachers are advised to be able to increase knowledge about learning innovations and learning media, which can later be applied in the learning process. The school should prepare facilities optimally that are able to support the process of learning activities so that students can learn more effectively and motivated. For other researchers, this research can be used as a reference when looking for sources that can be obtained in this study.

#### References

- A, C. (2017). Penerapan Model Pembelajaran Kooperatif Tipe Talking Stick Berbantuan Media Gambar Untuk Meningkatkan Hasil Belajar. *Wacana Akademika*, 1(2). <http://www.risearchgate.net/publication/325289701>
- Adnyana. (2017). Pengaruh Model Pembelajaran Kooperatif Tipe Talking Stick Terhadap Kompetensi Pengetahuan IPA. *Mimbar PGSD Undiksha*, 5(3).
- Amanda, S. (2017). Pengaruh Model Pembelajaran Inquiri Terbimbing Berbantuan Media Audio Visual Terhadap Kompetensi Pengetahuan IPA Siswa Kelas IV. *Mimbar PGSD Undiksha*, 5(2).
- Anggara, C. (2018). Pengaruh Model Pembelajaran Tipe TPS Berbantuan Peta Konsep Terhadap Kompetensi Pengetahuan IPA. *International Journal of Elementary Education*, 2(2). <https://ejournal.undiksha.ac.id/index.php/IJEE/article/view/14407>
- Anggraeni, W. (2020). Pengaruh Model Pembelajaran Talking Stick Berbantuan Media Question Card Terhadap Kompetensi Pengetahuan IPA. *Jurnal Penelitian Dan Pengembangan Pendidikan*, 4(1). <https://ejournal.undiksha.ac.id/index.php/IJEE/article/11608>
- Anisa, S. (2017). Model Pembelajaran Talking Stick Dalam Meningkatkan Keterampilan Mengkomunikasikan Pembelajaran Sejarah Bagi Peserta Didik. *Pendidikan Sejarah FKIP Universitas Lambung Mangkurat Banjarmasin*, 2(7). <https://files.osf.io/v1/resources/2f7jk/providers/osfstorage>
- Apriyanti, D. (2017). Pengaruh Model Kooperatif Talking Stick Berbantuan Qustion Card Terhadap Kompetensi Pengetahuan IPS Siswa Kelas IV. *Mimbar PGSD Undiksha*, 5(2). <http://ejournal.undiksha.ac.id/index.php/JJPGSD/article/view/10790>
- Apriyanti, Dewi. (2017). Pengaruh Model Pembelajaran Talking Stick Berbantuan Media Qustion Card Terhadap Kompetensi Pengetahuan IPS Siswa Kelas IV. *Mimbar PGSD Undiksha*, 5(2). <https://ejournal.undiksha.ac.id/index.php/JJPGSD/article/view/10790>
- Arikunto, S. (2015). *Dasar-Dasar Evaluasi Pendidikan*. PT Bumi Aksara.
- Arsani, W. (2018). Pengaruh Model Pembelajaran Course Review Horay Terhadap Hasil Belajar IPA Siswa. *International Journal of Elementary Education*, 2(3). <https://ejournal.undiksha.ac.id/index.php/IJEE/article/view/15957>



- Astiti, M. (2017). Pengaruh Model Pembelajaran Children Learning In Science Berbasis Budaya Penyelidikan Terhadap Kompetensi Pengetahuan IPA. *Jurnal Of Education Technology*, 1(2). <http://ejournal.undiksha.ac.id/index.php/JET/article/view/11744>
- Astuti. (2017). Pengaruh Model Pembelajaran Talking Stick Berbasis Concept Song Terhadap Kompetensi Pengetahuan IPA. *Mimbar PGSD Undiksha*, 5(2).
- Barus, R. (n.d.). Penerapan Metode Outdoor Study Dalam Pembelajaran Ipa Untuk Meningkatkan Hasil Belajar Siswa Kelas IV SD Negeri 053963 Raja Tengah Tahun Ajaran 2018/2019. *Digital Repository Universitas Qualiy*.
- Candra, A. (2017). Pengaruh Model Discovery Learning Terhadap Kompetensi Pengetahuan IPA Siswa Kelas IV. *Mimbar PGSD Undiksha*, 5(2). <http://ejournal.undiksha.ac.id/indek.php/JJPGSD/article/view/10655>
- Devitasari. (2019). Keaktifan Model Savi Terhadap Minat dan Hasil Belajar IPA SDN Lawatan 01 Kabupaten Tegal. *Indonesian Jurnal of Conservatian*, 8(1).
- Dewi, E. (2018). Metode Pembelajaran Modern Dan Konvensional Pada Sekolah Menengah Atas. *Jurnal Ilmu Pendidikan, Keguruan Dan Pembelajaran*, 2(1).
- Dewi, J. (2018). Pengaruh Model Pembelajaran Problem Based Learning Berbantuan Media Audio Visual Animasi Terhadap Hasil Belajar IPA. *Mimbar PGSD Undiksha*, 2(2). <https://doi.org/http://dx.doi.org/10.23887/JJPGSD.v5i2.10657>
- Dewi, S. (2018). Pengaruh Model Pembelajaran Learning Cycle5e Berbantuan Media Lingkungan Terhadap Kompetensi Pengetahuan IPA. *Jurnal Penelitian Dan Pengemabangan Pendidikan*, 2(2).
- Irma, K. (2017). Penerapan Model Pembelajaran Talking Stick Disertai Metode Demonstrasi Berbantuan Media Kokami Mata Pelajaran IPA Di Smp. *Jurnal Pembelajaran Fisika*, 5(2). <https://media.meliti.com/media/publications/115920-ID-penerapan-model-pembelajaran-talking-sti>
- Janayanti, F. (2017). Pengaruh Model Pembelajaran Kooperatif Tipe Talking Stick Dan Motivasi Berprestasi Terhadap Hasil Belajar IPS. *Mimbar PGSD Undiksha*, 5(2). <http://ejournal.undiksha.ac.id/index.php/JJPGSD>
- Karunia, F. (2017). Pengembangan Media Pembelajaran Berbasis Macromedia Flash 8 Pelajaran IPA Materi Energi Listrik Kelas IV Di SD. *Institutional Reposytory*. <http://eprints.umm.ac.id/35617/>
- Kusuma, J. (2018). Penerapan Model Pjbl Berbantuan Media Audio Visual Untuk Meningkatkan Hasil Belajar IPA. *Jurnal Ilmiah Pendidikan Profesi Guru*, 1(1). <https://doi.org/http://dx.doi.org/10.23887/jipgg.v1i1.14263>
- Lidia, W. (2018). Pengaruh Model Talking Stick Terhadap Hasil Belajar IPS. *JT2IPS*, 3. <http://dx.doi.org/10.17977/um022v3i22018p081>
- Megita, R. (2019). Pengaruh Model Pembelajaran Talking Stick Berbantuan Lagu Tradisional Terhadap Kompetensi Pengetahuan IPA. *Mimbar Ilmu*, 24(3). <http://ejournal.undiksha.ac.id/index.php/MI/article/view/21676>
- Meileni, N. (2017). Pengaruh Model Pembelajaran Talking Stick Berbantuan Teka-Teki Silang Terhadap Minat Dan Hasil Belajar IPA Siswa Kelas IV SD. *Mimbar PGSD Undiksha*, 5(2). <http://ejournal.undiksha.ac.id/index.php/JJPGSD>
- Muhamad, A. (2017). Pengaruh Model Pembelajaran Kooperatif Tipe Talking Stick Terhadap Hasil Belajar IPA. *Mimbar PGSD Undiksha*, 5(2). <http://ejournal.undiksha.ac.id/index.php/JJPGSD>
- Murtiningsih. (2017). Penerapan Model Pembelajaran Talking Stick Pada Mata Pelajaran IPS DI Sekolah Dasar. *Prosiding Seminar Nasional KSDP Prodi S1 PGSD*, 1(12). <http://pgsd.fip.um.ac.id/wp-content/uploads/2017/01/12>
- Prayudi, E. (2017). Pengaruh Penggunaan Media Audiovisual Dengan Pendekatan Metakognitif Berbasis Masalah Terhadap Hasil Belajar Fisika Siswa Kelas XI IPA. *Jurnal Pendidikan Fisika Dan Teknologi*, 3(1). <http://jurnalkip.unram.ac.id/index.php/JPFT/article/view/324>
- Putri, G. (2018). Pengaruh Media Pop-Up Card Terhadap Hasil Belajar Siswa Pada Materi Penggolongan Hewan Berdasarkan Jenis Makanannya. *Jurnal Ilmiah Pendidikan Guru Sekolah Dasar*, 5(1).

- Rositayani. (2018). Pengaruh Model Pembelajaran Children's Learning In Science Berbantuan Media Audio Visual Terhadap Kompetensi Pengetahuan IPA. *Jurnal Ilmiah Sekolah Dasar*, 2(3). <https://doi.org/http://dx.doi.org/10.23887/jisd.v2i3.16150>
- Saharuhin, A. (2018). Meningkatkan Hasil Belajar Siswa Kelas IV-B Melalui Pemanfaatan Media Audio Visual (Film-Projector) SD Negeri Kompleks IKIP 1 Makasar. *Jurnal Ilmu Pendidikan, Keguruan Dan Pembelajaran*, 2(2). <https://doi.org/https://doi.org/10.26858/pembelajar.v2i2.7098>
- Septina, H. (2018). Peningkatan Kecakapan Berkomunikasi dan Hasil Belajar PKn Siswa Kelas VI dengan Talking Stick Berbantuan Salindia. *Jurnal Pendidikan Dan Kebudayaan*, 8(3). <https://ejournal.uksw.edu/scholaria/article/view/1791>
- Setyosari, P. (2015). *Metode Penelitian Pendidikan dan Pengembangan*. Prenadamedia Group.
- Sugiyono. (2018). *Metode Penelitian Kuantitatif, Kualitatif, dan R & D*. Alfabeta.
- Suryani, N. (2017). Pengaruh Model Pembelajaran Learning Cycle Berbantuan Media Audio Visual Terhadap Kompetensi Pengetahuan IPA Siswa Kelas IV. *Mimbar PGSD Undiksha*, 5(2). <http://ejournal.undiksha.ac.id/index.php/JJPGSD>
- Tarigan, S. (2017). Improving Student Learning Outcomes In Subject IPS Using Mode Numbered Head Together On Grade IV In Elementary School. *International Conference On Global Education V " Global Education, Common Wealth, and Cultural Diversity*, 10(11).
- Trisnawati, A. (2017). Pengaruh Model Pembelajaran Kooperatif Tipe Talking Stick Berbantuan Media Audio Terhadap Hasil Belajar IPS. *Mimbar PGSD Undiksha*, 5(2). <http://ejournal.undiksha.ac.id/index.php/JJPGSD>
- Wedanti, A. (2017). Pengaruh Model Pembelajaran Kooperatif Tipe Talking Stick Terhadap Kompetensi Pengetahuan IPA. *Mimbar PGSD Undiksha*, 5(2). <http://ejournal.undiksha.ac.id/index.php/JJPGSD>
- Wijayanti. S. (2017). Pengaruh Model Pembelajaran Kooperatif Tipe Talking Stick Berbantuan Media Audio Visual Terhadap Hasil Belajar IPS. *Mimbar PGSD Undiksha*, 5(2).
- Yanti, M. (2017). Pengaruh Model Pembelajaran Creative Problem Solving Berbasis Educative Games Terhadap Kemampuan Berpikir Kritis dan Hasil Belajar Ipa Kelas IV. *Jurnal Ilmiah Pendidikan Dan Pembelajaran*, 1(2).
- Yusuf, M. (2015). *Asessmen dan Evaluasi Pendidikan*. Prenadamedia Group.