Indonesian Journal of Education & Mathematical Science
Vol. 5, No. 1, Januari 2024, pp. 19~26
ISSN: 2715-985X, DOI: 10.30596/ijems.v5i1.16350

The Influence of the Cooperative Integrated Reading and Composition (CIRC) Learning Model Assisted by Audio-Visual Media on Science Learning Outcomes of Class VII Solar System Material SMPN 8 South Bengkulu

Raudhatul Jannah[1], Adisel [2], Wiji Aziiz Hari Mukti [3]
[1,2,3]Universitas Islam Negeri Fatmawati Sukarno Bengkulu, Bengkulu, Indonesia
[1]raudhtulira2712@gmail.com
[2]adisel@uinfasbengkulu.ac.id

ABSTRACT

This study aims to determine the effect of the Cooperative Integrated Reading and Composition learning model (CIRC assisted by audio-visual media) on science learning outcomes for class VII solar system material at SMPN 8 Bengkulu Selatan. This research is a quasi-experimental study with the Non-Equivalent Control Group Design Collection technique. The data in this study was carried out by observation (initial observation), tests and photographs. The data analysis technique used conditional testing and hypothesis testing. The population in this study was class VII, totaling 151 students. The sample of this study was taken by using a purposive sampling technique. The data collection method used was a multiple choice test. The data source in this study was taken from pre-test questions and post-test questions with 20 multiple choice questions. The results of the statistical test with the help of SPSS Version 26 showed the value. sig.(2-tailed) > 0.05 or 0.381 > 0.05. It can be seen that the experimental and control pretests show no significant effect. Based on data analysis using the t-test, it shows that the t-count value = 21.4 and the t-table value = 2.048 So that t-count (2.14) > t-table (2.048) with a significance level of 5%. This shows that there is a significant influence of the Cooperative Integrated Reading and Composition (CIRC) learning model assisted by picture story media on the learning outcomes of class VII science.

Keywords: CIRC Model, Audio Visual Media, Learning Outcomes

This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

Corresponding Author:
Raudhatul Jannah
Department of English Education
UIN Fatmawati Sukarno Bengkulu, Jl. Raden Patah Pagar Dewa, Bengkulu, 38211
raudhatulira2712@gmail.com

1. INTRODUCTION

National education is an effort to provide guidance from the roots of the nation's own culture to all its citizens, so that citizens who are knowledgeable, educational, have a high mentality, have noble character, responsibility, are ready to carry out the mandate, continue the nation's struggle carried by him based on Pancasila and the 1945 Constitution In this era of development, Education is an aspect of life that is very fundamental for the development of a country's nation, this is accompanied by the development of science and technology (IPTEK) in life. Education is always closely related to science and technology which has a big contribution in life to improve human resources. The rapid development of science and technology has given rise to equipment and applications that are very easy for a teacher to learn and use as a learning medium

To see learning activities can run actively and efficiently can perform classroom actions. Classroom action research is an examination of the paid learning activities of an action, which is deliberately raised and occurs in a classroom simultaneously. One way to awaken Student activity in the learning process is to use the right learning model so that learning can make students as subjects who try to explore themselves, solve their own problems from a concept being studied Schools as one of the formal educational institutions have the responsibility to educate students. For this reason, the school organizes teaching and learning activities as a realization of educational goals that have been Set. In addition, in the teaching and learning process, teachers have the duty to encourage, guide and provide learning facilities for students. Education is not only to meet curriculum targets, but education is a need that must be met in the life of society, nation and state. Education also functions to develop the ability to shape the character and civilization of a dignified nation in order to educate the nation's life

Vol. 5, No. 1, Januari 2024, pp. 19~26
ISSN: 2715-985X, DOI: 10.30596/ijems.v5i1.16350

The learning model is a form of learning that is illustrated from beginning to end which is presented typically by a teacher. In other words, the learning model is a wrapper or frame of the application of a learning approach, method, and technique. Choosing a teaching model, must adjust to existing reality and the existing classroom situation, as well as the outlook on life that will result from the process of cooperation carried out between teachers and students The component of the learning model is the media, the word "media" comes from Latin and is the plural form of the word "medium" which is literally "intermediary or introduction". The use of learning media in addition to making it easier for educators to deliver material to students also helps to increase student motivation to learn more interactively and more actively in the classroom so that there is feedback on educators and students.

One of the learning models that can be applied in junior high school is the cooperative integrated reading and composition (CIRC) learning model assisted by audio-visual media. Cooperative integrated reading and composition (CIRC) The model itself is a comprehensive program to teach reading and writing in elementary school classes at higher levels as well as in secondary schools. Educators use reading materials that contain practice questions and stories. The learners are assigned to pair up in their teams to learn in a series of activities that are cognitive while audio-visual media is a combination of Audio and Visual used in learning by using video or images and sound. Audio Visual Media is media that has elements of sound and elements of images that can be seen, such as video recordings, slides, sounds, and so on.

To achieve optimal student learning outcomes, many factors influence it, both internal and external factors. Internal factors include physical and psychological factors in students such as interests, intelligence, talents, intelligence levels and other factors. External factors include environment and instrument such as curriculum, programs, facilities, methods, models, strategies and so on. Low science learning outcomes can be caused by several things such as learning models that are less varied and internal factors in students such as lack of understanding and mastery of subject matter, student misconceptions in some subjects and lack of understanding of student learning styles Science Learning Considered able to present natural concepts and phenomena while encouraging the emergence of spirituality for those who study it. In this case the material developed is solar system matter consisting of matter as the center of the solar system, planets and other objects surrounding the sun.

Based on initial observations and interviews conducted by researchers at SMPN 8 South Bengkulu on February 6, 2022, the learning media used by teachers and students of SMPN 8 South Bengkulu is in the form of textbooks published from the ministry of education and culture, researchers found several problems related to the Learning media, that is, the material in science books has not varied to make students less interested To read the material in the book, learning media has not been equipped with audio-visual media, the method used by science teachers is a conventional method (lecture), this results in students feeling bored during learning. Therefore, an Audio Media-Assisted Cooperative Integrated Reading and Composition (CIRC) Learning model is needed Visual at the time of learning. Audio-visual media that display the reality of the material can provide real experience to students when learning it, thus encouraging self-activity (Fujiyanto Ahmad, Jayadinata Asep Kurnia, Kurnia Dadang 2016).

2. RESEARCH METHOD

This research is a type of quantitative research with a quasi-experimental pseudo-experimental approach using a Non-equivalent type of control Group design research design which in its design involves 2 groups, namely: experimental group and control group. The experimental group was given a pre-test before the treatment was imposed. Then, given a post-test after the treatment was distributed, the population in this study was all students of SMPN 8 South Bengkulu. The samples in this study were class VII C (30 people) and class VII E (31 people) while the instruments in this study were 20 multiple-choice questions. The data collection techniques in this study are through: observation, questionnaires and documentation.

Indonesian Journal of Education & Mathematical Science
Vol. 5, No. 1, Januari 2024, pp. 19~26
ISSN: 2715-985X, DOI: 10.30596/ijems.v5i1.16350

Table 1. *Desain non-Equivalent* Control Group Desaign

Class	*prettest*	Tretmen	*posttest*
Experiments	O_1	X	O_2
control	O_3	-	O_4

Information:

O1= Experimental Class Prettest
O2= Experimental Class Posttest
O3=Control Class Pretest
O4=Posttest Control Class
X = Treatment of experimental classes with Cooperative learning model

3. RESULTS AND DISCUSSION

A learning model is a pattern used as a guideline in planning learning in class and tutorials. The learning model refers to the approach to be used, including in learning objectives, stages in learning activities, and classroom management. A learning model can be defined as a conceptual framework that describes a systematic procedure for organizing learning experiences to achieve learning objectives *Cooperative Integrated Reading Composition (CIRC) is a comprehensive program to teach reading and writing in elementary school classes at higher levels as well as in secondary schools. CIRC learning educators use reading materials that contain practice questions and stories*. Learners are assigned to pair up in their teams to learn in a series of activities of a cognitive nature, including reading stories to each other, making predictions about how a story ends, summarizing each other, telling each other, writing responses to stories, and practicing pronunciation, acceptance, and vocabulary. Students also learn in teams to master main ideas and other comprehensive skills. (Arend,)

A. Cooperative learning model type Cooperative Integrated Reading Composition is divided into several phases, namely:
   1) The first phase, which is orientation. In this phase, educators perceive and initial knowledge of students about the material to be given. In addition, it also explains the learning objectives that will be carried out to students.
   2) The second phase, which is organization. Educators divide learners into groups, paying attention to academic heterogeneity. Distribute reading materials about the material to be discussed with students. In addition, it explains the mechanism of group discussions and tasks that must be completed during the learning process.
   3) The third phase, namely the introduction of concepts. By introducing a new concept that refers to the results of discoveries during exploration. This introduction can be obtained from educators' statements, package books, films, clippings, posters or other media.Fase
   4) Fourth, namely the publication phase. Students communicate the results of their findings, prove, demonstrate the material discussed both in groups and in front of the class
   5) The fifth phase, which is the strengthening and reflection phase. In this phase, educators provide reinforcement related to the material learned through explanations or providing real examples in everyday life. Furthermore, students are also given the opportunity to reflect and evaluate their learning outcomes.

B. Cooperative Learning Steps Cooperative Integrated Reading Composition (CIRC) Type

   1) CIRC learning has steps in learning, namely: Forming heterogeneous groups of four.
   2) Educators provide discourse/clippings according to the learning topic.
   3) Students work together to read and find the main idea and respond to discourse/clippings and written on paper, present or read out the results of the group.
   4) Educators make conclusions together.
   5) Learning closed

C. Audio visual

Vol. 5, No. 1, Januari 2024, pp. 19~26
ISSN: 2715-985X, DOI: 10.30596/ijems.v5i1.16350

Is a medium that has elements of sound and also elements of images. This type of media has better expertise, because it includes both types of auditive (listening) and visual (seeing) media. So, it can be concluded that audio-visual media is an auxiliary tool, audio visual which means materials or tools used in learning situations to help writing and also spoken words in giving knowledge, attitudes, and ideas

D. Various kinds of learning media

Broadly speaking, the media is divided into:

1) Audio media, which are media that contain messages in auditive form (can only be heard) that can stimulate the thoughts, feelings, attention and ability of students to learn teaching materials. Examples include radio and voice recordings.
2) 2) Visual media, namely media that can only be seen and do not contain sound elements, such as pictures, paintings, photographs, and so on.
3) Audio visual media, namely media that contain sound elements and also have image elements that can be seen, such as video recordings, films and so on.

E. Benefits and Functions of Learning Media

One of the main functions of learning media is as a teaching aid that also affects the climate, conditions, and learning environment arranged and created by teachers. The use of learning media at the learning orientation stage will greatly help the activeness of the learning process and the delivery of messages and content lesson at that time. In addition to arousing student motivation and interest, learning media can also help students increase understanding, present data interestingly and reliably, facilitate data interpretation and condense information. Sudjana and Rivai stated the benefits of learning media in the student learning process, namely:

1) Learning will attract more students' attention so that it can foster learning motivation.
2) Learning materials will have a clearer meaning so that they can be better understood by students and allow them to master and achieve learning objectives.
3) Teaching methods will be more varied, not only verbal communication through the narration of words by the teacher so that students do not get bored and the teacher does not run out of energy especially if the teacher teaches at every lesson hour.
4) Students can do more learning activities because they not only listen to the teacher's description, but also other activities such as observing, doing, demonstrating, acting out and others.

F. Factors that affect the use of learning media that can be used as the basis for the selection activities include the following: goals to be achieved.

1) Student characteristics
2) The type of learning stimuli desired
3) The state of the setting or environment
4) The extent of the range you want to service.

G. Advantages of Audio Visual Media

Teaching materials are clearer in meaning so that they can be more easily understood by students, and allow students to master teaching objectives better.

1) Teaching will be more varied, not solely verbal communication through the narration of words by the teacher. So that teachers do not run out of energy and students do not get bored.
2) Students do more learning activities, because they not only listen to the teacher's description, but also observe, do demonstrations and others
3) Teaching will attract more students' attention so that it can foster student motivation.

H. Learning Outcomes

Understanding Learning Outcomes Activities carried out by individuals will result in changes, changes in both knowledge and attitudes and skills. That change is the result that has been achieved from the learning process. Learning outcomes are the abilities that students have after

receiving their learning experience. While learning is done to strive for behavior changes in individuals who learn. Changes in behavior are acquisitions that become learning outcomes, in addition to cognitive learning outcomes obtained by students. "In general, learning is a process of behavior change obtained from the experience of the individual concerned". (Muhamad Asrori 2009:6)

I. Factor What Affects Learning Outcomes

Each learning activity produces a distinctive change as a result of learning. Learning outcomes can be achieved by students through efforts as behavior changes which include cognitive, affective and psychomotor domains, so that the goals that have been set are achieved optimally. The learning outcomes obtained by students are not the same because there are several factors that affect their success in the process of learning. Broadly speaking, the factors that affect learning success can be divided into two major parts, namely internal and external factors

J. Internal factors

The Psychological Aspect consists of:

1) Intelligence has a huge influence on learning progress.
2) Attention To ensure good learning outcomes, students must have attention to the material they will learn. Attention is the heightened activeness of the soul, the soul is solely focused on an object (thing / thing) or a set of objects
3) Great interest has an influence on learning, because if the learning material is not in accordance with interests, students will not study seriously. d. Talent Is the potential ability that a person has to achieve success.
4) Motivation Motivation is closely related to the goals to be achieved.

K. External factors

a. Family Aspect

Family education is part of the extramural education pathway that is organized within the family and that provides religious beliefs, cultural values, moral values, and family aspect skills consisting of:

1) How Parents Educate Children The way parents educate children has a great influence on their children's learning. Parents who do not pay attention to their children's education can cause children to be less successful in learning.Home Atmosphere To make children learn well, it is necessary to create a calm and serene home atmosphere. If the atmosphere of the house is calm, a child will feel at home and the child can learn well.
2) Family Economic Situation The economic condition of the family also greatly affects children's learning.

b. School Aspects

School aspects that affect learning outcomes include:

1) Teaching methods.
2) Teacher-Student Relationship Teachers who interact less with students can cause the teaching and learning process to be less smooth.
3) School discipline is closely related to the craft of students going to school and also studying.

The large number of students as well as the characteristics of each vary, they are demanding circumstances.

L. Solar System

The solar system consists of a star that we call the sun and all the objects that surround it. The object includes eight planets, satellit-satellit natural, meteor, asteroid, comet and palnet-dwarf or dwarf planets. The solar system is believed to have formed since 4.6 billion years Last year, it was the result of the accumulation of gas and dust in space that formed the sun and then the planets that surround it. Solar System Located in the Milky Way Galaxy Galaxies are collections of stars, where stars are celestial bodies that emit their own light. The solar system itself has

several components, namely: the sun, the planets, and various Celestial bodies such as satellites, comets, and asteroids. The solar system is located in the Milky Way galaxy or commonly also called the Milky Way.

This research was conducted at an educational institution located in South Bengkulu district, Kedurang sub-district. Precisely Jl Tj Besar at SMPN 8 South Bengkulu. This research was conducted on the subject of the solar system which was carried out in 2 classes, namely VII C as a control class totaling 31 students and VII E as an experimental class totaling 31 students The following are the mean values of the experiment class and control class presented in the table below.

Table 2. Mean Student Learning Outcomes

Class	Mean Student Learning Outcomes	
	Pretest	***Posttest***
Experiments	64	82
Control	60	78
Control	60	78

The results of learning solar system material students in experimental and control classes were obtained from conducting a final test (post-test) at the end of the study. The results of this study showed that the learning outcomes between experimental classes were different from those of control class students. This is because students in the experimental class received treatment in the form of applying the Cooperative Integrated Reading and Composition learning model (*CIRC) assisted by audio-visual media, while in the control class did not get treatment in the form of applying the Cooperative Integrated Reading and Composition (CIRC) learning model assisted by audio-visual media. After the –t test at a significant level of 5% (0.05) obtained the sig value. (2-tailed) > 0.05 or 0.214 >0.05. It can be known that the experimental pretest and control showed no* There is a significant influence. Then data were also obtained from both classes from normally distributed populations with each class getting >0.05 and having homogeneous data diversity.

After being given differences in treatment, which in the experimental class uses the learning process with a model *Cooperative Integrated Reading and Composition (CIRC)* Assisted by audio-visual media while the control class uses conventional classes, the average score of the experimental class is greater than the average control which is 82 >78. From the experimental and control groups tested in the posttest, a significant difference of 5% sig (2 tailed) 0.05 or 0.831 was found; 0.05). It is clearly seen that the significance effect occurs in the posttest. The value of student learning outcomes increased after using audio-visual media. The CIRC learning model is one type of cooperative learning model that uses small groups and each group consists of 4-5 heterogeneous students. In the CIRC model, each student is responsible for his or her group assignments. Each member of the group brings out ideas to each other to understand a concept and solve it The tasks given, so that a good understanding and learning experience is formed. In the learning process, a model will be successfully applied if it follows the stages of the model. (Istarani (2015)

Similarly, CIRC type cooperative learning has several stages, starting with providing discourse in accordance with the learning topic, students work together to read and find main ideas and respond to the material provided then present the results of the group and end with making conclusions together. The CIRC learning model can be assisted by using media, one of the learning media that can be used is audio-visual media. The role of media is very important in the learning process, in addition to sebagai perantara pesan pembelajaran, juga bisa memberikan pengalaman belajar yang variatif, Fostering attitudes and creating a meaningful learning atmosphere, thus having an impact on improving student learning outcomes because students are more understanding and enthusiastic in participating in learning.

CIRC learning capital that makes students experience a meaningful learning process by exploring their own knowledge to solve a problem, the teacher only acts as a companion and facilitator. of which the CIRC learning model is one model Learning based on constructivism where in teaching and learning

activities between the concepts learned are associated with their application, so that it will provide considerable opportunities in the learning process based on the initial knowledge that students already have, learning Meaningfully with students who are fully involved in teaching and learning activities make students' mastery of concepts on the material deeper, students' understanding becomes deeper when compared to learning by memorization. This CIRC learning research, in addition to Observing student learning outcomes also observing student and teacher activities using observation sheets. This aims to see the attitudes of students and teachers during the teaching and learning process. (Jatmiko 2013)

The findings in this study are supported by research conducted which emphasizes that the results of learning science material solar system students who receive learning with the Cooperative Integrated Reading and Composition (CIRC) learning model assisted by audio-visual media are different from students who use conventional models A learning model is a pattern used as a guideline in planning learning in class and tutorials. According to Arend, the learning model refers to the approach to be used, including in learning objectives, stages in learning activities, and classroom management. A learning model can be defined as a conceptual framework which describes the systematic procedure for organizing learning experiences to achieve learning objectives Cooperative Type Integrated Reading Composition (CIRC) is a comprehensive program To teach reading and writing in elementary school classes at higher levels as well as in secondary schools. CIRC learning educators use reading materials that contain practice questions and stories. The learners are assigned to pair up in their teams to learn in a series Activities that are cognitive in nature, including reading stories to each other, making predictions about how the story will end, summarizing each other, telling each other, writing responses to stories, and practicing pronunciation, acceptance, and vocabulary Students also learn in teams to master main ideas and other comprehensive abilities. Widiasih (2013).

4. CONCLUSION

Based on the results of research and data analysis conducted at SMPN 8 South Bengkulu, it can be concluded that there is an influence of the Cooperative Integrated learning model *Reading and Compotition (CIRC)* assisted by audio-visual media on solar system material on the learning outcomes of grade VII students of SMPN 8 South Bengkulu for the 2023/2024 academic year. This result can be seen in a significantly higher average score compared to the control class using conventional models (82 >78) These results were further supported by data analysis conducted using SPSS version 26, resulting in significant levels of SIG. (2 tailed) >.05 . The results of the examination obtained a t value greater than or equal to 2.14 with a significant level 5 % *sig* (2-tailed) 0,05 ataup p = 0.03). The final result obtained a GIS significance level (2 tailed) 0.05 or 0.831. So this reveals that the CIRC model assisted by audio-visual media has a significant influence on the learning outcomes of grade VII students of solar system material at SMPN 8 South Bengkulu

REFERENCES

[1] Abdul Haris & Asep Jihat. 2018. *Evaluasi pembelajaran*. Yogyakarta : multi pressindo
[2] Arikunto Suharsimi. 2019. Prosedur Penelitian Suatu Pendekatan Praktik. Jakarta: Rineka Cipta
[3] Arsyad Azar. 2018. Media Pembelajaran. Jakarta: Rajawali Pers
[4] Audie, N. 2019. Peran media pembelajaran meningkatkan hasil belajar peserta didik. In *Prosiding Seminar Nasional Pendidikan FKIP* (Vol. 2, No. 1, pp. 586-595).
[5] Awal, R., & Farma, N. 2016. Pengaruh Model Pembelajaran Cooperative Integrated Reading And Compotition (Circ) Berbantuan Media Gambar Pada Materi Sistem Ekskresi Manusia Terhadap Hasil Belajar Siswa Kelas Viii Smpn 6 Pekanbaru TA 2014/2015. *Bio-Lectura: Jurnal Pendidikan Biologi*, *3*(2).
[6] Buaton, R. A., Sitepu, A., & Tanjung, D. S. 2021. Pengaruh Model Pembelajaran Kooperatif Tipe Group Investigation terhadap Hasil Belajar Siswa pada Pembelajaran Tematik di Sekolah Dasar. Edukatif: Jurnal Ilmu Pendidikan, 3(6), 4066-4074.
[7] Dewisari Achmad, A. M. 2017. Pengaruh Model Pembelajaran *Cooperative Integrated Reading And Composition* (CIRC) dengan Peta Konsep terhadap Keterampilan Berpikir Kritis dan Hasil Belajar IPA-Biologi Siswa.

Vol. 5, No. 1, Januari 2024, pp. 19~26
ISSN: 2715-985X, DOI: 10.30596/ijems.v5i1.16350
[8] Fitria, H., Kristiawan, M., & Rahmat, N. 2019. Upaya meningkatkan kompetensi guru melalui pelatihan penelitian tindakan kelas. *Abdimas Unwahas*, *4*(1).
[9] Hasriyanti, H. 2019. Pengaruh Model Pembelajaran Cooperative Integrated Reading And Composition (Circ) Terhadap Hasil Belajar Siswa Sekolah Menengah Atas. *LaGeografia*, *18*(1), 36-42.
[10] Isnaini, R. 2019. Peningkatan Hasil Belajar IPA Materi Sistem Tata Surya Melalui Media Audio Visual Pada Siswa Kelas VII Semester 2 SMP Negeri 3 Getasan Kabupaten Semarang Tahun Pelajaran *2018/2019* (Doctoral dissertation, Iain Salatiga).
[11] Kesumadewi, D. A., Agung, A. A. G., & Rati, N. W. 2020. Model Pembelajaran CIRC Berbantuan Media Cerita Bergambar Meningkatkan Hasil Belajar Bahasa Indonesia Siswa SD. *Mimbar PGSD Undiksha*, *8*(2), 303-314.
[12] Khairunisa, R. W., & Basuki, B. 2021. Perbandingan Kemampuan Komunikasi Matematis Siswa antara Model Pembelajaran Kooperatif Tipe TPS dan CIRC. Plusminus: *Jurnal Pendidikan Matematika*, *1*(1), 113-124.
[13] Komulasari Kokom. 2017. *Pembelajaran Kontekstual Konsep dan Aplikasi* Bandung: PT. Refika Aditama
[14] Tukiran Taniredja, Efi Miftah dkk. 2013. Model-model Pembelejaran Inovatif dan Efektif. Bandung: Alfabeta
[15] Utami, m. t., koeswati, h. d., & giarti, s. 2019. model problem based learning (pbl) berbantuan mediaaudio visual untuk meningkatkan keterampilanberpikir kritis pada siswa kelas 5sekolah dasar. *maju: jurnal ilmiah pendidikan matematika*, *6*(1).
[16] Syaputri, C. N., & Djulia, E. 2018. Pengaruh model CIRC (cooperative integrated reading and composition) dengan menggunakan peta konsep terhadap hasil belajar siswa pada materi jaringan tumbuhan di kelas XI IPA SMA Muhammadiyah 1 Medan. Jurnal Pelita Pendidikan, 6 (1).