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THE EFFECT OF CIRCUIT LEARNING MODEL ASSISTED BY FLIP CHART MEDIA ON SCIENCE LEARNING OUTCOMES

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Abstract

This study looks into how well flipcharts and the circuit learning model might improve scientific learning results and cooperative attitudes in Indonesian elementary school students. In order to address the widespread problem of low educational quality, the research proposes a novel method of instruction. The underutilization of engaging media in scientific education is the research gap, and the uniqueness is in suggesting the circuit learning model with flipcharts as a possible solution. The study used the independent sample t-test as a quantitative method for assessing hypotheses. The experimental group outperformed the control group in terms of learning outcomes, according to the statistical results. The findings of the t-test ($p < 0.05$) attest to the effectiveness of the circuit learning model utilizing flipcharts in improving science learning. In particular, there was an increase in student involvement, attention span, and general learning activities when flipchart media was used. These statistical results offer empirical backing for the suggested intervention, indicating that it has the capacity to close the noted research gap and improve students' academic and social learning experiences. The statistically significant findings of this study suggest that teachers should think about implementing the circuit learning model with flipcharts as a successful tactic to enhance scientific teaching outcomes.

Keywords: Circuit Learning Model, Flip Chart Media, Science Learning

INTRODUCTION

An essential component of a country's development is its educational system. The role of education is to develop and generate human resources who are knowledgeable and tolerant. The standard of education in a nation is one measure of its growth (Fägerlind & Saha, 2016). As a result, numerous initiatives are still being undertaken to manage educational issues. The roles of educators must be in line with efforts to raise educational standards. In order for pupils to easily absorb the material being taught, teachers must be able to lead, guide, and create a pleasant learning environment (Prayuda et al., 2022). Teachers must choose an efficient learning model to pique

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students' interest in learning in order to implement active learning. The study of nature and its components is known as natural science.

One's attempts to adopt a rational and scientific attitude can also be found in natural science. It is anticipated that science instruction will help students gain knowledge and understanding of the environment and themselves that they may use in their daily lives. It is therefore anticipated that science instruction in elementary schools will help pupils develop an awareness of both themselves and their environment. Students studying science need to be able to perceive, observe, analyze, and solve problems that arise in daily life in addition to memorization and knowledge. Science is the method of studying an item, making scientific discoveries, and creating scientific products. The scientific theory will be applied to create technology that will make living more convenient.

Application of science education is crucial for elementary school pupils' learning since it teaches them how to be scientific and solve problems(DeBoer, 2019). Learning about real-world or event-based natural phenomena and causal linkages is one of the unique learning attributes of science. Students can also learn about themselves and their surroundings through studying science. Students that study science will have a greater awareness of their surroundings. It is anticipated that science instruction in primary schools would foster critical thinking and active participation in the community (Aryanto et al., 2017).

The primary issue with Indonesian education is its poor quality, as seen by the low academic performance of elementary school pupils. It can be inferred from the findings of the researchers' observations that certain pupils required assistance in comprehending science when they required assistance in comprehending the primary ideas. Because the teacher hasn't yet used engaging media, students claim that they have trouble understanding when the teacher teaches the content.

Students are bored in the classroom when the teaching method is still the lecture technique. In the classroom, science instruction still needs to be more thorough and is mostly taught to engaged students. Some pupils tend to remain silent when studying about plants since they find it difficult to voice their ideas. Still, these institutions must ensure that the learning outcomes of their students meet expectations. The findings of studies on the process of learning science provide this knowledge.

No cooperative attitudes have been developed in the classroom to promote the best possible learning outcomes. Students often learn science on their own, and only a small percentage of them actively participate in asking the teacher questions and providing answers (Aziz et al., 2020). It would be ideal if these issues didn't affect pupils' cooperative and cognitive attitudes. The Minimum Completeness Criteria is not being met by the average value of student learning outcomes. Finding answers for student learning outcomes that fall into the low category is therefore essential.

A more creative learning approach that can produce an engaging learning environment is one way to solve the problem. It is therefore anticipated that creative learning will pique students' curiosity about science and motivate them to participate more actively in their education. Innovative approaches are being used to apply models and educational materials that are imaginative, successful, and capable of fostering cooperative attitudes among students. The circuit learning model model is one of the applicable learning models. With the teacher acting as a facilitator and motivator, group exploration is a learning paradigm that gives students the chance to actively learn with friends (Muhammad et al., 2023).

Through active participation in the learning process, this educational media can enhance student interest in studying and lead to better learning outcomes. Students that follow the circuit learning model model actively study, look for relevant material, and inevitably become critical thinkers. One particularly effective teaching strategy that may be used to promote cooperative and dynamic learning settings is the group exploration model. This approach, which is based on the idea of student engagement and involvement, casts the teacher in the role of facilitator and motivator and casts students as active participants in a group environment. This cooperative environment fosters a deeper comprehension of the material as well as a sense of camaraderie among the students (Benedetti et al., 2019).

The circuit learning model paradigm gives students the freedom to direct their own education. They actively look for and acquire significant knowledge, which helps them to develop critical thinking and research skills. This method facilitates the organic growth of critical thinking skills in pupils as they progress through the educational process. The focus on inquiry-based learning and active participation is consistent with modern educational philosophies that place a high value on the growth of students' cognitive and analytical abilities (Leng et al., 2021; Pramita et al., 2019).

The circuit learning model model's capacity to pique students' interest in learning is one of its main advantages. Students acquire a sense of ownership over their educational experience and are driven by their classmates when a collaborative learning environment is established. The social interaction that occurs in a group environment gives the learning process a dynamic element that increases its enjoyment and engagement. The general learning outcomes of kids may benefit from this intrinsic drive (Yoshino et al., 2017).

Additionally, the circuit learning model paradigm supports students' overall growth. In addition to learning subject-specific information, students improve their collaboration and communication abilities. Working together with peers promotes the sharing of ideas, a range of viewpoints, and helpful criticism, all of which contribute to a well-rounded educational experience. To sum up, the circuit learning model model shows promise as a potent teaching approach that puts students at the center of their learning process. This methodology increases students' enthusiasm in learning while

also encouraging critical thinking, active learning, and information-seeking behavior. Educators can foster the development of well-rounded and engaged learners by implementing the circuit learning model model, which allows for the creation of a dynamic and collaborative learning environment that goes beyond traditional teaching approaches. Circuit learning model learning involves selecting relevant topics, putting pre-planned topic plans into action, compiling and evaluating information, and conducting assessments. Students that follow the circuit learning model learning style may develop a scientific mindset. Group inquiry has the benefit of being a straightforward, efficient method of academic science instruction that also fosters social development.

When the circuit learning model model is used well in the classroom, students perform better and develop a scientific mindset as a result of using it. The learning model is a framework that guides the creation of curricula, material selection, and teacher guidance on how to implement learning in the classroom. A conceptual framework that directs learning activities is called a learning model. Anything that can be utilized to channel messages from senders to recipients in order to pique students' interests, feelings, and worries in a way that facilitates learning is considered media. There are many different types of learning material and ways to use them (Mukarromah et al., 2021).

One engaging learning resource for primary school pupils is a flipchart, which is used in conjunction with the circuit learning model model. Because flipchart media contains graphics that pique students' interest in investigating knowledge and solving certain challenges, it can help improve student learning outcomes and boost the effectiveness of student learning. In addition, flipchart materials typically include images that highlight key lessons, allowing pupils to take pleasure in reading lengthy text sections.

According to earlier studies, this media can enhance students' collaborative and cognitive learning skills. By using the circuit learning model paradigm, learning results and student motivation are increased. This indicates how student learning results are impacted by the circuit learning model learning paradigm with the help of flipchart media. It is unknown, therefore, how much the Circuit learning model learning paradigm using flipcharts has influenced students. The objective of this research is to examine how circuit learning models using flipchart media can enhance science learning objectives and students' cooperative attitudes. The availability of this research may help educators and learners achieve better learning outcomes.

RESEARCH METHOD

This study takes a quantitative method. Numerical methods involve the use of tables and figures. If the data has been gathered in a tabulation and is prepared for statistical processing, the analysis step is completed concurrently. A quasi-experimental design

includes this kind of methodology. A research technique called quantitative pseudo-experimentation uses manipulations of independent variables and the resulting changes to test causal hypotheses. The researchers did not choose the sample at random for the quasi-experimental form of non-equivalent control group design. In the quasi-experimental non-equivalent control group design, a random sample was chosen. The experimental class and the control class are used in this study's sample (Lachner, 2021; Meiza et al., 2018).

The control group and the experimental group were selected at random. A article from earlier research served as the basis for writing the control and experimental classes. Assign the pieces of paper to the class leader at random. The class serves as a researcher's experimental class for those who receive samples of experimental written papers, and vice versa. There were pre-test questions given to the experimental and control groups. The purpose of the pre-test was to determine the students' starting skills and was administered prior to the research subjects receiving treatment. Every class received attention.

Using flipchart media, the experimental class in this study was treated as part of a circuit learning model approach. On the other hand, the control group either didn't receive a model or kept using the standard learning model, which is the direct instruction model. Post-test questions were provided to both classes following their respective treatments. Posing is then used to ascertain the students' ultimate competency following treatment. The findings of the pre- and post-tests can be used to compare student scores before and after treatment.

Flipchart media served as the dependent variable in this study, while cooperative attitudes and learning outcomes served as the independent variables. The dependent variable was the circuit learning model variable. In this study, a thorough assessment of the effects of the circuit learning model model on the learning process is based on a careful consideration of variables. The variables under examination comprise both the independent and dependent components, offering a complex framework for examination.

The use of flipchart media is the dependent variable in this research. This variable, which represents the channel by which pupils receive information, is a crucial element. Flipchart media's selection as the dependent variable recognizes its importance in the educational process. The goal of the study is to assess how this particular medium affects students' overall learning outcomes, comprehension, and level of involvement.

Conversely, the circuit learning model model is the independent variable. This variable, which emphasizes inquiry-based discovery, active student participation, and collaborative learning, embodies the methodological approach used in the study. As it is changed to see how it affects the other factors being considered, the circuit learning model model remains an independent variable. Two different dimensions within the domain of the independent variable are further investigated. First of all, the

interpersonal and collaborative dynamics that exist within student groups are reflected in cooperative attitudes. This variable evaluates the degree to which students exhibit cooperative behaviors, positive attitudes, and effective communication during the group inquiry process. Cooperative attitudes have a significant impact on the overall effectiveness of the instructional model and are essential markers of the success of collaborative learning environments. Second, the learning outcomes variable explores the scholastic successes and cognitive enhancements brought about by applying the group inquiry approach. This component assesses how the selected teaching strategy affects students' comprehension of the material, their capacity for critical thought, and their overall academic achievement. One of the most important metrics for assessing how well the circuit learning model model facilitates meaningful and long-lasting comprehension is learning outcomes. Through the examination of these variables—flipchart media as the dependent variable, cooperative attitudes and learning outcomes as the independent variables—the research seeks to analyze the complex interactions among teaching strategies, group dynamics, and academic success.

This detailed inquiry offers a thorough knowledge of how flipchart media and the circuit learning model model affect students' attitudes, cooperative behaviors, and academic success in the classroom. The skills that kids get from learning activities are known as learning outcomes. One of the skills in social behavior patterns is cooperation. Because it collects data directly by treating the experimental class and comparing it to the control class, this study uses primary data. In this study, tests, questionnaires, observation, and documentation are the methods used to collect data. In addition, the study's instrument is a topic of testing.

The research hypothesis in this study is tested using the independent sample t-test (uncorrelated). We conducted an assumption analysis test, which included the normality test and uniformity test with the Shapiro-Wilk normality test, to confirm the distribution of the data, prior to evaluating the hypothesis using the inferential statistical approach. Furthermore, tests for validity and reliability were conducted to verify the quality of the data used.

FINDINGS AND DISCUSSION

The media support group flipchart survey model was used in teaching and learning activities, and the results indicated disparities in the learning outcomes of the students. These variations suggest that fourth-grade science learning outcomes are impacted by the group inquiry learning methodology supported by flipcharts. Variations in learning outcomes are caused by a number of influencing factors. First off, by giving students the freedom to explore learning resources through group study activities, the circuit learning model model can both increase learning activities and help them pay attention. Flipcharts, which have colorful visuals that are more attractive in relation to the themes

addressed, are an excellent tool for enhancing learning activities and drawing students' attention (Ristanto & Mahardika, 2021).

Table 1. Students' Attitudes

Class	Criteria	Total	Percentage
	Very high	5	23 %
	High	4	19 %
	Medium	6	29 %
V A	Low	6	29 %
	Very high	5	23 %
	High	3	14 %
	Medium	6	29 %
V B	Low	7	33 %

When they were given the opportunity to ask and respond to questions from the teacher based on the content displayed on the flipchart, a significant portion of the student body raised their hands. Because flipchart media features an image display that encourages students to do more and demonstrates passion to explore material and solve issues, it can help increase student learning outcomes and activities. Flipcharts are study sheets that are packaged neatly in flat packets and tied at the top so that each sheet may be turned over individually to view them. Using paper components that are readily available in our surroundings, flipcharts are a reasonably easy-to-use print medium that have a very basic manufacturing process. Because flipcharts may be used as print media, it is incredibly effective.

The second is how well flipchart media are used in the teaching and learning process. With its captivating images, flipchart media aids in and has the potential to enhance student learning outcomes and effectiveness. Students study more fervently, look for information, and work through specific issues. To keep students motivated, flipcharts typically have illustrations that illustrate the key learning concepts, much like an extended article in a book. These media can draw students' attention and enhance educational activities. The flipchart has eye-catching, vibrant images for every subject. The amount of students who raised their hands when they were given the opportunity to ask and respond to questions from the teacher based on the information displayed on the flipchart stands served as evidence of this. By showcasing images that students are curious about and desire to investigate, flipchart media can enhance student learning outcomes and activities (Putra & Ayuningtyas, 2019).

Moreover, it is possible to offer messages on practical learning. For kids receiving instruction through teacher-centered, traditional methods, this is not the case. In this learning process, teachers are in charge of more learning activities; they actively plan, carry out, and finish evaluations; students pay attention to what the teachers are explaining and watch the activities. Students who receive instruction from teachers are passive. Students merely participate in class as observers and takers of the teacher's

knowledge. Less than ideal scientific literacy was the outcome of the treatment difference between the experimental group, which received the flipchart-assisted experimental learning model, and the control group, which did not receive this therapy. less than the experimental group as well.

Table 2. Normality Test

Variable	Sig	Description
Attitude (Experiment)	0,875 > 0,05	Normally Distributed
Attitude (Control)	0,264 > 0,05	Normally Distributed
Pre-test (Experiment)	0,120 > 0,05	Normally Distributed
Posttest (Experiment)	0,123 > 0,05	Normally Distributed
Pre-test (Control)	0,075 > 0,05	Normally Distributed
Post-test (Control)	0,102 > 0,05	Normally Distributed

The flipchart media group research approach has both benefits and drawbacks. On the plus side, students find learning to be highly engaging and follow the growing experience with greater enthusiasm. Additionally, students' curiosity (interest) is piqued by the information on the flipchart, which makes them more dynamic in their clarification of urgent problems. It can boost students' motivation to learn so they are more engaged with the subject matter. But this has disadvantages. In everyday interactions, very few students are engaged. Student disputes are challenging to resolve since meetings frequently result in conflicting emotions. Because they must become accustomed to realizing new things, they struggle to discover new ones. There must be more materials available to enhance existing materials.

Nevertheless, student learning results can be enhanced by the circuit learning model learning approach with the help of flipchart media. In addition to improving students' creativity in creating terms in their native language, group research learning models also help students stay focused on their studies through trained attentiveness. Combining flipchart media with the circuit learning model learning approach proves to be a powerful motivator for raising student learning outcomes. This collaborative approach goes beyond traditional teaching strategies to create an atmosphere that supports other critical facets of a student's intellectual growth in addition to improving academic performance.

Table 3. Hypotheses Test

Variable	Sig.	Description
Attitude (Experiment * Control)	0,033 < 0,05	Ho Rejected
Experimental Group Learning Outcomes (Pretest*Posttest)	0,00 < 0,05	Ho Rejected
Control Group Learning Outcomes (Pretest*Posttest)	0,329 > 0,05	Ho Accepted / Ha Rejected

Enhancing students' creativity in creating terms in their home tongue is one significant aspect of this rich learning experience. Students are encouraged to actively engage with course material through the circuit learning model model, which places a

strong emphasis on collaborative exploration. Using flipchart media gives this process an additional visual and interactive dimension and offers a dynamic platform for language expression. Students are encouraged to express their ideas more creatively and are exposed to a variety of viewpoints through group discussions. This language-based activity can greatly advance language proficiency and help students develop a stronger connection to the material (Rini et al., 2021).

Additionally, the learning paradigm of circuit learning model facilitates educated concentration in students. During learning exercises, the collaborative nature of this technique and the visual aid of flipchart media instill a sense of focus and concentration. Through debates, problem-solving, and critical thinking activities guided by the circuit learning model model, students actively participate in the learning process. By offering a visual anchor for talks, flipchart media, when used as an additional tool, improves this concentration and keeps students focused and interested. Furthermore, the maintenance of pupils' focus on learning is greatly dependent upon informed concentration. In a cooperative learning environment, students actively participate in the learning process rather than just being passive consumers of knowledge. When accompanied with visual aids such as flipchart media, this active engagement produces an enriched learning environment that captures students' interest and holds it throughout the learning process.

In summary, a revolutionary approach to education is created when the circuit learning model learning paradigm and flipchart medium are combined. This strategy fosters a complete and engaging learning experience by promoting educated concentration and nurturing linguistic creativity in the students' native tongue, in addition to its impact on academic outcomes. Teachers can fully utilize these cutting-edge approaches to improve the academic and creative aspects of student learning by utilizing visual aids and collaborative learning tactics (Barkah, 2022). Group research utilizing flipcharts to enhance science learning results and students' collaborative attitudes bolstered the success of this study. Based on this, this learning model can be applied to a variety of learning tasks in order to maximize learning achievement at school, keep students engaged, and make learning more enjoyable.

CONCLUSION

In the classroom, student learning results and collaborative attitudes can be enhanced by using the flipchart-assisted group investigative learning paradigm. Because learning practices change from being teacher-centered to being student-centered, the circuit learning model learning model, with the help of flipchart media, increases students' science learning results. The instructor's role is limited to oversight of the educational process.

The group investigative learning approach with flipchart support is a game-changer when it comes to improving student learning results and encouraging collaborative

attitudes in the classroom. This novel technique recasts the dynamics of classroom instruction, moving it away from conventional teacher-centered approaches and toward a more student-centered paradigm. This has numerous positive effects on academic performance as well as social skills.

The tremendous impact that the flipchart-assisted group investigative learning approach has on student learning outcomes is one of its main advantages. Through the incorporation of flipchart media into the circuit learning model approach, educators establish a visually exciting and dynamic classroom setting. Flipcharts provide students with strong visual aids that help clarify difficult topics, making learning more approachable and interesting for them. By empowering students to actively engage in the investigation of scientific topics, the teacher-centered approach is replaced with a student-centered one, which promotes a deeper comprehension and retention of the material (Abdul et al., 2019).

With the aid of flipchart media, the group research model fosters collaborative attitudes, another important factor. This learning approach's collaborative nature enables students to collaborate, exchange ideas, and participate in thought-provoking conversations. Flipchart media's visual clues act as a catalyst for efficient communication, enabling students to express their ideas and points of view clearly. Their comprehension of scientific ideas is improved by this cooperative engagement, which also fosters positive interpersonal traits like cooperation, attentive listening, and tolerance for differing viewpoints.

Furthermore, the change from a teacher-centered to a student-centered approach is consistent with modern educational theories that place a high value on critical thinking and active learning. Pupils actively participate in their education rather as being passive recipients of knowledge, which enhances the quality of their educational experience. This shift in strategy takes into account the various learning preferences and styles of the students, allowing for a range of skill levels and encouraging a sense of control over their education (Khasanah et al., 2022; Maulani et al., 2021).

Finally, it can be said that the circuit learning model learning model supported by flipcharts is a dynamic and successful teaching approach that enhances student learning results and collaborative attitudes. Through the integration of visual aids and collaborative learning approaches, educators can establish a learning environment that fosters critical interpersonal skills in addition to academic performance. With the aid of flipchart media, scientific education is taking a more progressive and all-encompassing turn, with a focus on student-centered learning that promises long-term advantages for both academic and social growth. Students also have every chance to actively participate in and be directly involved in the learning process. The findings of this study should help educators establish a welcoming environment that will help students' comprehension of their experiences become more refined. This can be achieved by using the circuit learning model learning model in conjunction with flipchart media.

REFERENCES

Abdul, M., Syafar, M., Arsunan, A. A., & ... (2019). Effectiveness of Flipchart Toimprove Knowledge and Attitude about Tuberculosison Mandar Etnic in Majene District West Sulawesi. *Indian Journal of …*.

Aryanto, S., Budiarti, T., Rahmatullah, R., Utami, S. R., & Jupri, A. (2017). Role Playing Based on Multicultural for Understanding Fraction in Primary School. *Journal of Physics: Conference Series*, *895*(1). https://doi.org/10.1088/1742-6596/895/1/012149

Aziz, A., Sari, N. R., & Sibilana, A. R. (2020). *Improving Student Achievement Using Flipchart Based Cooperative Learning in Tulungagung*. repository.unisma.ac.id. http://repository.unisma.ac.id/handle/123456789/2299

Barkah, L. (2022). Pengaruh Media Flipchart terhadap Pemahaman Konsep IPA Kelas IV Sdn Kalideres 09 Pagi Jakarta Barat. *Berajah Journal: Jurnal Ilmiah Pembelajaran Dan …*. https://ojs.berajah.com/index.php/go/article/view/76

Benedetti, M., Grant, E., Wossnig, L., & ... (2019). Adversarial quantum circuit learning for pure state approximation. *New Journal of …*. https://doi.org/10.1088/1367-2630/ab14b5

DeBoer, G. (2019). *A history of ideas in science education*. Teachers college press.

Fägerlind, I., & Saha, L. J. (2016). *Education and national development: A comparative perspective*. Elsevier.

Khasanah, L., MZ, A., & ... (2022). Pengaruh Penggunaan Media Flipchart Terhadap Hasil Belajar Menulis Surat Resmi Siswa Kelas V di Sekolah Dasar. *Jurnal Jendela …*. https://ejournal.jendelaedukasi.id/index.php/JJP/article/view/141

Lachner, A. (2021). Fostering pre-service teachers' technological pedagogical content knowledge (TPACK): A quasi-experimental field study. *Computers and Education*, *174*. https://doi.org/10.1016/j.compedu.2021.104304

Leng, J., Ruan, G., Song, Y., Liu, Q., Fu, Y., Ding, K., & ... (2021). A loosely-coupled deep reinforcement learning approach for order acceptance decision of mass-individualized printed circuit board manufacturing in industry 4.0. *Journal of Cleaner …*. https://www.sciencedirect.com/science/article/pii/S0959652620344504

Maulani, J., Mulyana, E. H., & Rahman, T. (2021). PENGEMBANGAN MEDIA FLIPCHART SUBTEMA GEJALA ALAM UNTUK MEMFASILITASI KECERDASAN NATURALIS ANAK USIA DINI 5-6 TAHUN. *Jurnal PAUD Agapedia*. https://ejournal.upi.edu/index.php/agapedia/article/view/39689

Meiza, A., Puspasari, D., & Kardinah, N. (2018). *Comparative Analysis from Experimental Psychology: Application of Behavior Modification Methods for Children with Down Syndrome Based on Islamic Value*.

Muhammad, I., Darmayanti, R., & ... (2023). Teori Vygotsky: Kajian bibliometrik penelitian cooperative learning di sekolah dasar (1987-2023). *Bulletin of …*. http://journal.rafandhapress.com/BEMI/article/view/78

Mukarromah, J. Z., SUTOMO, M. O. H., & ... (2021). Pengembangan Media Pembelajaran Berbasis Flipbook Dalam Menunjang Proses Pembelajaran Siswa. *PESAT*. http://ejournal.paradigma.web.id/index.php/pesat/article/view/59

Pramita, P. A., Sudarma, I. K., & ... (2019). Pengaruh Model Pembelajaran Circuit Learning Berbantuan Media Flip Chart Terhadap Hasil Belajar IPA. *Jurnal Ilmiah Pendidikan …*. https://ejournal.undiksha.ac.id/index.php/JIPPG/article/view/18082

Prayuda, M. S., Silalahi, T. S. M., & Almanda, F. Y. (2022). TRANSLATION OF THEMATIC STRUCTURE OF DESCRIPTIVE TEXT FROM INDONESIAN INTO ENGLISH. *Pendidikan Bahasa Indonesia Dan Sastra (Pendistra)*, 148–151. http://ejournal.ust.ac.id/index.php/PENDISTRA/article/view/2365

Putra, R. P., & Ayuningtyas, T. R. (2019). Pengembangan media pembelajaran flip chart berbahan dasar bambu. *HISTORIA: Jurnal Program Studi …*. https://ojs.fkip.ummetro.ac.id/index.php/sejarah/article/view/1906

Rini, D. R., Ratnawati, I., & Wulandari, R. T. (2021). The development of a flip book as an online learning media. *KnE Social Sciences*. https://knepublishing.com/index.php/KnE-Social/article/view/9209