JPPIPA 11(5) (2025)

Jurnal Penelitian Pendidikan IPA

http://jppipa.unram.ac.id/index.php/jppipa/index

The Use of Nearpod Interactive Media in Science Subjects in Elementary Schools

Adib Muzakki[1*] , Wuri Wuryandani[1] , Sekar Purbarini Kawuryan[1]

[1] Departemen Pendidikan Dasar, Prodi Pendidikan Dasar, Fakultas Ilmu Pendidikan dan Psikologi, Universitas Negeri Yogjakarta.

Received: February 20, 2025
Revised: April 28, 2025
Accepted: May 25, 2025
Published: May 31, 2025

Penulis Terkait:
Adib Muzakki
adib.muzakki21@gmail.com

DOI: 10.29303/jppipa.v11i5.11182

Abstract: This study uses a literature study method or Systematic Literature Review (SLR) which examines the use of Nearpod interactive media in the subject of science in elementary schools. This study aims to provide information related to the use of Nearpod interactive media in the subject of science in elementary schools in supporting the learning process in the classroom. The method used is a literature study where the data used is data from various sources, such as journals, books, scientific papers, and other libraries. The collection of data is analyzed one by one to be grouped and combined into a complete conclusion. The results of the study show that the use of Nearpod interactive media in the subject of science in elementary schools greatly supports the learning process, Nearpod has proven effective in improving students' understanding of concepts, strengthening mastery of material better than conventional methods. In addition, Nearpod not only supports students' cognitive aspects, but also makes it easier for teachers to design more interactive and structured learning. Therefore, Nearpod is an alternative digital learning media that is very potential to be applied in science learning in elementary schools.

Keywords: Elementary schools; Interactive Media; Nearpod; Science subjects.

Introduction

Education is a very fundamental basic need for humans (Fathurohim, 2023). Through education, it will be able to improve quality to become more productive and form better or more focused attitudes, and be able to overcome the demands and challenges faced by each individual (Febriani et al., 2023). The quality of education through educational technology is known to have been adopted throughout the world where constructivist activities will be carried out (Coddington et al., 2021). Education must be able to use technology in the learning process, this has the aim that students can develop in today's learning process, so that learning that was initially centered on teachers becomes centered on students (Anita et al., 2022). Technology has an important role in determining the changes that have been and will be experienced by the world of education (Garbin et al., 2021).

The increasing access to the Internet, it is not uncommon to find that students prefer to play games, watch cartoons (Tyng et al., 2021) using computers or cellphones rather than opening and studying school textbooks. By giving students the opportunity to adopt new technology while learning (McNeil, 2020) can make learning active and motivate students to create new things (Janpirom et al., 2019). For this reason, the use of technological resources is one way that can be used to develop the world of education, one of which is through learning media (Priana, 2017).

Boonmee (2021) explains that learning media is a mediation tool that supports learning between teachers and students. Learning media has a crucial role in learning in helping teachers provide information in an

How to Cite:
Muzakki, A., Wuryandani, W., & Kawuryan, S. P. (2025). The Use of Nearpod Interactive Media in Science Subjects in Elementary Schools. *Jurnal Penelitian Pendidikan IPA*, *11*(5), 44–49. https://doi.org/10.29303/jppipa.v11i5.11182

interesting way so that students become more interested in learning (Wulandari et al., 2023).

The use of adequate media can build students' understanding and interest, especially in conceptual and abstract material (Nurhayati et al., 2020). Learning media is an important foundation that functions as a complement and a vital part of the success of the learning process (Wulandari et al., 2021). Learning media according to Ummi & Erita (2021), consists of various aspects reviewed in several different aspects, for example media based on technological developments. One of the latest innovations in this case is interactive media. Interactive learning media is a digital media that is integrated with each other to help teachers interact with students which includes electronic text, graphics, moving images and sound (Purnama & Pramudiani, 2021). Utama & Salim (2021) the integration of interactive learning media has been proven effective in improving student learning outcomes (Putri & Amini, 2023), and has various advantages, including improving student skills and understanding (Mubarak et al., 2023). One example of an application that can be used for interactive learning media is Nearpod.

The Nearpod application is an application that is one of the learning space platforms that presents interaction between students and teachers, where educators can create presentation materials that can use the features available in the Nearpod application containing images, text, videos, and even quizzes to be played together **(Sudirman, 2020)**.

One of the subjects that also uses Nearpod as a learning medium is Science. In the independent curriculum itself, there is a new update from the previous curriculum, namely in science and social studies learning to become IPAS (Natural and Social Sciences). In learning IPAS, it helps students grow their curiosity about the knowledge of phenomena that occur around them (Sugih et al., 2023).

Combining science and social studies lessons into natural and social sciences (IPAS) at the Elementary School level. This combination occurs because elementary school students tend to see everything as a whole, students are still in the stage of simple thinking, and trigger students to think as a whole nature and social (Marwa et al., 2023).

In science learning, the delivery of interdisciplinary material requires innovative and adaptive teaching strategies. One solution to create interesting and easy-to-understand learning is to utilize interactive learning media. Nearpod is one of the digital platforms that supports this kind of learning. With features such as interactive quizzes, learning videos, simulations, and collaborative activities, Nearpod allows the learning process to be more lively and participatory.

Interactive media based on Nearpod can help teachers convey complex science concepts more visually and enjoyably, so that students can understand the material more easily. In addition, the use of Nearpod can also increase student involvement in the learning process because they can interact directly with the material presented. Teachers can also monitor student development in real-time and adjust teaching methods according to class needs.

Then, the use of Nearpod in science learning provides opportunities for teachers to continue to develop professionally. They can explore various technological features to design creative and meaningful learning. Based on these conditions, this study aims to provide information related to the use of Nearpod in supporting the learning process in the classroom. Therefore, a study was conducted with the title "The Use of Nearpod Interactive Media in Science Subjects in Elementary Schools".

Method

This research was conducted with a descriptive-qualitative approach through the Systematic Literature Review (SLR) method. This method relies on literature searches and analysis as the main source in formulating theoretical basis and building a scientific framework related to the issues studied. Data were obtained from various references, such as scientific journals, books, and other relevant written works. The main focus of this study is the use of Nearpod as a medium to support the learning process.

In its implementation, there are four important stages that are carried out. First, researchers prepare research equipment and instruments. Second, compile a bibliography that is in accordance with the topic. Third, manage time efficiently to support the smooth running of the research process. Finally, researchers read, record, and summarize findings from various literatures (Kurniawan et al., 2023).

As part of the methodology, this study also uses content analysis and a descriptive approach to verify and evaluate the data obtained. With this method, researchers can critically assess the appropriateness of information from various sources and ensure that all data collected supports research arguments and ideas. This analysis also allows researchers to dig deeper into information, identify patterns, and draw stronger conclusions regarding the influence and effectiveness of Nearpod use in the learning process (Anggraeni & Fitria, 2023; Ulfah et al., 2022). Thus, the approach used in this study not only prioritizes data collection, but also aims to make a significant contribution to the development of theory and practice in the field of education, especially

in the use of digital learning technologies such as Nearpod.

Results and Discussion

There are five previous research samples that discuss the use of Nearpod media in science subjects in elementary schools. First, based on research conducted by Hasanah & Sukitman (2025), entitled "The Effect of Using Nearpod Media on Understanding of Science Material on Object Motion in Grade 3 Students of SDN Padelegan 1".

The results of the analysis indicate a significant difference between the posttest scores in the two groups. The average posttest score obtained by the experimental group showed higher results compared to the control group (M = 85.50, SD = 2.52) (M = 72.00, SD = 2.00). The increase in understanding was measured through N-Gain, which showed a high category for the group undergoing experimental intervention. (0.684) And is included in the moderate category for the conventional group. (0.406). The independent t-test (t = 13.05, p <0.001) confirmed that Nearpod substantially strengthened students' understanding of the concept of object motion.

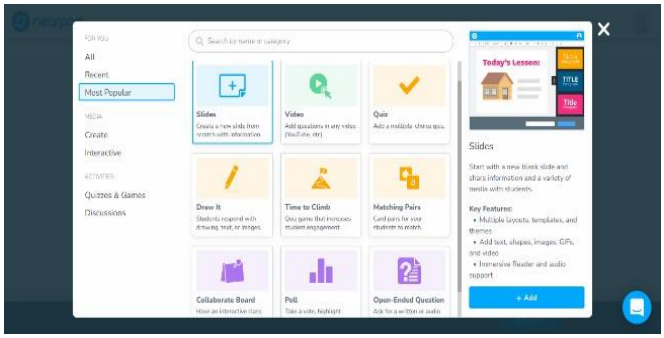


Figure 1. Features on Nearpod

Slide Material

The slide feature is almost similar to PowerPoint which is useful for delivering material.

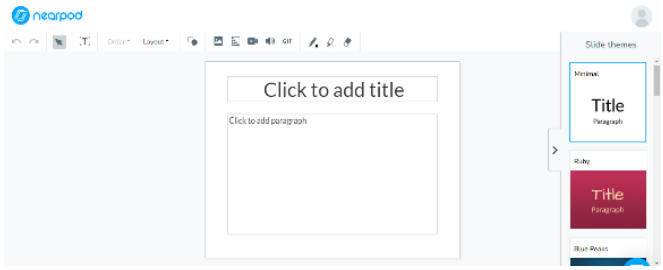


Figure 2. Slide Material Features

Video source

The video feature makes it easier to deliver materials, both self-made videos and those from sources provided by Nearpod. This feature is also connected to the YouTube application, thus expanding the choice of learning sources.

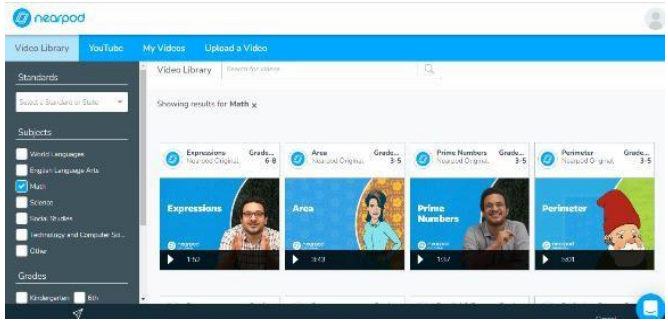


Figure 3. Video Source Features

PakET feature

This feature was created by Nearpod and PakET to make it easier to understand problems through visual displays.

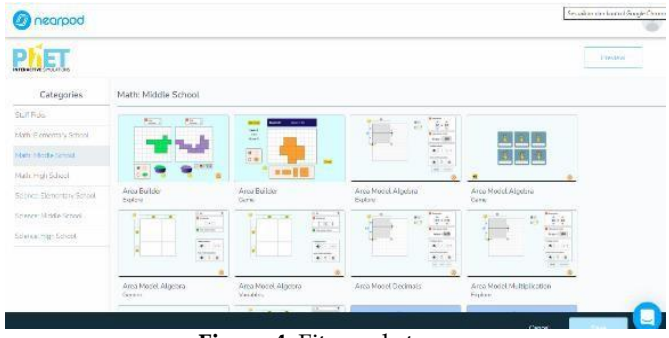


Figure 4. Fiture pket

Matching pairs game

This feature makes students more active because it is in the form of a game that helps them understand the relationship between answers.

Figure 5. Matching pairs game

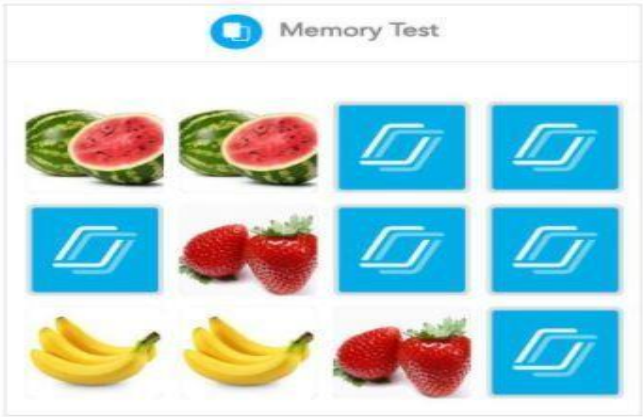
Time to climb game

This feature is a competitive style quiz, where students answer questions to complete challenges.

Figure 6. Game Features Time to Climb

Permainan *Collaborate Board*

Fitur ini berupa papan tulis online, di mana guru mengajukan pertanyaan dan siswa menuliskan jawabannya langsung di papan.



Gambar 7. Collaborate Board game

Permainan *Memory Test*

Fitur ini bermanfaat bagi peserta didik dalam meningkatkan ingatan memori.

Figure 8. Collaborate Board game

Second, based on research conducted by Ulva & Hayati (2024) entitled "Development of Interactive Multimedia Based on Nearpod Website in Social Sciences Subjects for Grade V Human Organ System Material". The purpose of this study is to produce valid and practical interactive multimedia for teachers to use in social science learning. The product is interactive multimedia based on nearpod in the social sciences subject for grade V human organ system material.

The results of the study are that language validation obtained an average score of 4.7 with a very valid category. Media validation obtained an average score of 4.8 in the very valid category. Material validation obtained an average score of 4.7 in the very valid category. The expert practitioner assessment obtained an average score of 4.93 with a very practical conclusion. And the student response questionnaire obtained an average score of 4.8 and was in the very practical category.

Third, based on research conducted by Maharani et al. (2024) entitled "Feasibility of Nearpod Media Based on Problem Based Learning in Science Learning for Grade V Elementary Schools". This research was conducted to produce Nearpod media that is considered suitable by experts and practitioners, and practical for teachers and students. The results of this study are the results of the validation of Nearpod interactive media from various experts (media, content, and language) produced an overall score of 88% with the category "very valid". The teacher response questionnaire produced a score of 92% which was considered "very feasible", while the student trial produced a score of 94% which was considered "very valid". In conclusion, Nearpod interactive media for science education is considered suitable and practical for use in the classroom.

The fourth study conducted by Utami (2023) entitled "Development of Nearpod-Based Interactive Learning Media on National Events Material During the Colonial Period for Class V". The focus of the study of the material in this media contains social studies lesson content. The results of this study indicate that this media obtained a very feasible category with a percentage of 98.52% from media experts and a percentage of 93.75% from material experts. The results of the t-test show that the sig. (2-tailed) value is 0.000 meaning <0.05, so it can be concluded that there is an increase in the average pretest and posttest scores. The N-Gain test shows a value of 0.49 with a moderate category, so it can be concluded that there is an increase in the average pretest and posttest scores. The fifth study conducted by Fareza, (2023) entitled "Development of Nearpod-Based Interactive Learning Media in Plant Reproduction Material for Grade VI Elementary School Students". In this study, the media product development results obtained media validation results of 90%, material validation of 92%, while the level of material achievement was 88%, and based on the N-Gain calculation from the student pretest and posttest, the

media got a score of 0.67, and a practicality score of 80.04%.

Conclusion

Based on the results of the studies that have been described previously, it can be concluded that the use of Nearpod interactive media has proven to be effective and feasible for use in the subject of science in elementary schools. Various studies have shown that Nearpod is able to significantly improve students' conceptual understanding, as indicated by higher posttest results and N-Gain scores that are in the medium to high category. The effectiveness of Nearpod is also supported by significant statistical test results, such as t-tests and expert validation, which show that Nearpod is able to strengthen mastery of the material in more depth compared to conventional methods. In addition to improving learning outcomes, the use of Nearpod media is also considered very valid and practical by media, material, language, and education practitioners experts. Nearpod-based media development products score high in terms of validity and practicality, both from the perspective of teachers and students. This shows that Nearpod not only supports students' cognitive aspects, but also makes it easier for teachers to design and implement more interactive, fun, and structured learning. Thus, Nearpod interactive media is one of the potential alternative digital learning media to be widely applied in the subject of science in elementary schools.

Acknowledgment
We would like to thank all parties who have supported the preparation of this article, especially to educators, co-authors, reviewers, and educational institutions that have provided relevant facilities and references. Hopefully this article is useful, and we greatly appreciate all constructive criticism and suggestions for future improvements.

Authors Contribution
This article was written by three authors, namely Adib Muzakki, Wuri Wuryandani, and Sekar Purbarini Kawuryan. All authors contributed to every stage of the research.

Funding
This research did not receive external funding.

Conflicts of Interest
There is no research that contains a conflict of interest.

References

Anggraeni, A., & Fitria, Y. (2023). Transformasi Peningkatan Kualitas Pembelajaran di Sekolah Dasar Melalui Pemanfaatan Teknologi Informasi dan Komunikasi. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, *8*(3), 5463–5477. https://doi.org/10.23969/jp.v8i3.11453

Anita, Y., Waldi, A., Akmal, A. U., Kenedi, A. K., Hamimah, H., Arwin, A., & Masniladevi, M. (2022). Pengembangan Bahan Ajar Elektronik Berbasis Social and Emotional Learning untuk Meningkatkan Nilai Profil Pelajar Pancasila Siswa Sekolah Dasar. *Jurnal Basicedu*, *6*(4), 7087–7095. https://doi.org/10.31004/basicedu.v6i4.3280

Boonmee, W. (2021). Teaching materials and learning in the 21st century. *Journal of Legal Entity Management and Local Innovation*, *7*(9), 373–386. Retrieved from https://so04.tci-thaijo.org/index.php/jsa-journal/article/view/249502

Coddington, M., Lewis, S. C., & Belair-Gagnon, V. (2021). The Imagined Audience for News: Where Does a Journalist's Perception of the Audience Come From? *Journalism Studies*, *22*(8), 1028–1046. https://doi.org/10.1080/1461670X.2021.1914709

Fareza, H. I. (2023). Pengembangan Media Pembelajaran Interaktif Berbasis Nearpod dalam Materi Perkembangbiakan pada Tumbuhan Siswa Kelas VI Sekolah Dasar. *Jurnal Penelitian Pendidikan Guru Sekolah Dasar*, *11*(1). Retrieved from https://ejournal.unesa.ac.id/index.php/jurnal-penelitian-pgsd/article/view/52388/42381

Fathurohim. (2023). Kurikulum Merdeka Dalam Perspektif Filsafat Pendidikan Islam. *Jurnal Asy-Syukriyyah*, *24*, 184–194. https://doi.org/10.36769/asy.v24i2.418

Febriani, A., Azizah, Y., Satria, N., & Setiawati, M. (2023). Strategi Guru Terhadap Pendidikan Kritis Dalam Penerapan Kurikulum Merdeka Belajar. *Jurnal Binagogik*, *10*(2), 331–339. https://doi.org/10.61290/pgsd.v10i2.554

Garbin, M. C., Oliveira, E. T., & Telles, S. (2021). Active methodologies supported by interaction and communication technologies in higher education: Communication Technologies in Higher Education. *Global Journal of Information Technology: Emerging Technologies*, *11*(2), 47–54. https://doi.org/10.18844/gjit.v11i2.6117

Hasanah, U., & Sukitman, T. (2025). Pengaruh Penggunaan Media Nearpod Terhadap Pemahaman Materi IPA Gerak Benda Pada Siswa Kelas 3 Sdn Padelegan 1. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, *10*(01), 231–245. https://doi.org/10.23969/jp.v10i01.23744

Janpirom, N., Kunlaya, S., Roungrong, P., & Kaewurai, R. (2019). Educational technology within Thailand 4.0. *Panyapiwat Journal*, *11*(1), 304–314. Retrieved from https://shorturl.asia/NXyoP

Kurniawan, H., Hakim, L., Sanulita, H., Maiza, M.,

Arisanti, I., Rismawan, M., & Amalia, M. M. (2023). *Teknik Penulisan Karya Ilmiah: Cara membuat Karya Ilmiah yang baik dan benar*. PT. Sonpedia Publishing Indonesia.

Maharani, P. S., Prasasti, P. A. T., & Retno, R. S. (2024). Kelayakan Media Nearpod Berbasis Problem Based Learning Dalam Pembelajaran IPAS Kelas V Sekolah Dasar. *Prosiding Konferensi Ilmiah Dasar*, *5*, 381–389. Retrieved from https://prosiding.unipma.ac.id/index.php/KID/article/view/5493

Marwa, N. W. S., Herlina, U., & Baina, Q. (2023). Persepsi Guru Sekolah Dasar Terhadap Mata Pembelajaran IPAS pada Kurikulum Merdeka. *Jurnal Pendidikan SD-An*, *18*(2), 54–56. https://doi.org/10.17509/md.v18i2.53304

McNeil, L. (2020). Implementing digital game-enhanced pedagogy: Supportive and impeding language awareness and discourse participation phenomena. *ReCALL*, *32*(1), 106–124. https://doi.org/10.1017/S095834401900017X

Mubarak, M. Z., Mastur, & Satrio, A. (2023). Pengembangan Video Animasi Pembelajaran Perilaku Konsumen Dengan Pendekatan Contextual Teaching And Learning Untuk Meningkatkan Minat Belajar Mahasiswa. *Journal of Instructional Technology J- INSTECH*, *4*(2), 36–46. https://doi.org/10.20527/j-instech.v4i2.8762

Nurhayati, S., Suryani, N., & Suharno. (2020). Need Analysis of Audiovisual Media Development to Teach Science Materials for Young Learners. *Journal of Educational Technology and Online Learning*, *3*(2), 152–167. https://doi.org/10.31681/jetol.672104

Priana, R. Y. S. (2017). Pemanfaatan vlog sebagai media pembelajaran teritegrasi tekhnologi informasi. *Prosiding Seminar Nasional Pendidikan FKIP Untirta*, *1*(2). Retrieved from https://jurnal.untirta.ac.id/index.php/psnp/article/view/313-316

Purnama, S. J., & Pramudiani, P. (2021). Pengembangan Media Pembelajaran Interaktif Berbasis Google Slide pada Materi Pecahan Sederhana di Sekolah Dasar. *Jurnal Basicedu*, *5*(4), 2440–2448. https://doi.org/10.31004/basicedu.v5i4.1247

Putri, V. M., & Amini, R. (2023). Integrated Thematic E-LKPD with RADEC-Based Neapod in Grade V Elementary School. *International Journal of Elementary Education*, *7*(2). Retrieved from https://ejournal.undiksha.ac.id/index.php/IJEE/article/view/61224

Sugih, S. N., Maula, L. H., & Nurmeta, I. K. (2023). Implementasi Kurikulum Merdeka dalam Pembelajaran IPAS di Sekolah Dasar. *Jurnal Pendidikan Dasar Flobamorata*, *4*(2), 599–603. https://doi.org/10.51494/jpdf.v4i2.952

Tyng, K. S., Badioze Zaman, H., Mohamad, U. H., & Ahmad, A. (2021). Visual Learning Application in Mathematics Using Holographic Display Based on Multi-touch Technology. *International Visual Informatics Conference*, 98–110. https://doi.org/10.1007/978-3-030-90235-3_9

Ulfah, U., Supriani, Y., & Arifudin, O. (2022). Kepemimpinan Pendidikan di Era Disrupsi. *JIIP-Jurnal Ilmiah Ilmu Pendidikan*, *5*(1), 153–161. https://doi.org/10.54371/jiip.v5i1.392

Ulva, D. A., & Hayati, S. (2024). *Pengembangan Multimedia Interaktif Berbasis Website Nearpod Pada Mata Pelajaran IPAS Kelas V Materi Sistem Organ Tubuh Manusia*. [Doctoral dissertation, UNIVERSITAS JAMBI]. Retrieved from https://repository.unja.ac.id/66793/

Ummi, K. K., & Erita, Y. (2021). Pengembangan Modul Berbasis Digital Menggunakan Aplikasi Flip Pdf Profesional Pada Pembelajaran Tematik Terpadu Di Kelas V Sekolah Dasar. *Journal of Basic Education Studies*, *4*(1), 3086–3096. Retrieved from https://ejurnalunsam.id/index.php/jbes/article/view/4083

Utama, A. H., & Salim, A. (2021). Program Pelatihan Pengembangan Bahan Ajar Berbasis Video Pembelajaran. *Journal of Innovation and Knowledge*, *1*(2), 73–82. https://doi.org/10.53625/jirk.v1i2.87

Utami, A. R. (2023). Pengembangan Media Pembelajaran Interaktif Berbasis Nearpod Materi Peristiwa Kebangsaan Pada Masa Penjajahan Kelas V. *Joyful Learning Journal*, *12*(4), 224–228. Retrieved from https://journal.unnes.ac.id/sju/jlj/article/view/78204

Wulandari, A. P., Salsabila, A. A., Cahyani, K., Nurazizah, T. S., & Ulfiah, Z. (2023). Pentingnya Media Pembelajaran dalam Proses Belajar Mengajar. *Journal on Education*, *5*(2), 3928–3936. https://doi.org/10.31004/joe.v5i2.1074

Wulandari, R. M., Widyaningrum, L., & Arini, L. D. D. (2021). Pengaruh Inovasi Cerdas Pada Sistem Muskuloskeletal Melalui Media Pembelajaraninteraktif Di Sekolah Dasa. *Jurnal Basicedu*, *5*(5), 3034– 3042. https://doi.org/10.31004/Basicedu.V5i5.1205