

## Financial Literacy of Elementary School Students Through RADEC Learning

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**Abstract.** This research is undermined by Indonesia's low economic independence index, which will be only 23.3% by 2022. It shows that people do not understand finance enough in terms of knowledge, attitudes, and skills to plan, manage, record, and store financial data. The method used is case studies, with data collection techniques through observations, interviews, and documentation. The subject of the study was 23 students in Bandung City. Descriptive analysis to interpret the data. Research results show that financial literacy through the RADEC model shows excellent results. Students can study the learning material with extensive resources before entering the class in the reading and answering phase. Financial literacy, which involves acquiring, spending, holding, and donating, can be integrated into material needs, desires, and abilities. The RADEC model stage gives students the opportunity to acquire and build their own knowledge either individually by visiting various resources or through discussions both within and among groups.

**Keywords:** Financial Literacy, RADEC Model, Elementary School, 21<sup>st</sup> Century Skill, Finance.

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### INTRODUCTION

The low Indonesian financial literacy index, at around 23.3%, indicates that people do not have sufficient understanding of finance in terms of knowledge, attitudes in planning and managing finance, and an orientation to record and store finance wisely (Kusumaningrum et al., 2023). Students' achievement in financial literacy through the new PISA ranking began in 2018, which is the third measurement worldwide, followed by 21 countries, and the latest in 2022, following 23 countries targeting 15-year-olds. The ranking in financial literacy is seen from four aspects: money and transactions, planning and managing finances, risk and reward, and the financial landscape, with an average score of 25–45% improving from the previous year. Specifically, financial literacy in primary school accounts for 11.9% of all levels of education, from non-educational starts to colleges. In strengthening financial literature, the Financial Services Authority (OJK) provides book package services from kindergarten level to college (OtoritasJasaKeuangan, 2020).

This financial literacy is important to do because it is part of the 21st century competence that students should have (Nudiati & Sudiapermana, 2020). Knowledge of finance of both terms and various financial terminologies is important to have in the middle of financial applications, stock sales, or bitcoin so that you can determine the strategy in choosing any form of financial services, either the latest mentioned above or that is already commonly conducted transactions in the bank both online and offline. A person who does not have a good attitude toward finance tends to not pay attention to spending and input well, so there is a crisis in managing finance. Borrowing that does not respect boundaries does not indicate a person has financial literacy in terms of attitude. Individuals who do not have savings either in the form of savings or are adaptive to the rising changes in the financial downturn in shares or bitcoin also indicate that the individual does not have good habits in financial literacy. Individuals who have good financial literacy when they are grown up, not acquired instantly but trained from an early age, learn to conduct economic activities, understand the terms of inputs and expenditures, as well as storage and use wisely, can have good economic literacy in adulthood.

Financial literacy plays a role in the growth of the economy of the people, financial problems are often associated with the large number of unemployment and criminality shown by the number of graduates that exceed the field of employment and the undeveloped potential of

citizens towards the processing of natural resources. With the existence of international relations and the global market giving the opportunity to the foreign labor force to fill the job in Indonesia, the crime due to the economic needs factor becomes a sustained problem so that there is a socialization of financial literacy against the people to deal with such matters. The attitude that a person has, according to the convergence theory, is built on two aspects: birth and paternity patterns, so that a generation with good financial literacy can be built through education. Financial literacy education should be given to children as soon as possible, especially in pre-school and elementary school. A study from the University of Cambridge revealed that children begin to form financial habits at the age of seven (Hikmah, 2020).

The aim of financial education from an early age is to provide a basic understanding of the importance of money so that children are expected to make better financial decisions when they grow up (Riza et al., 2022). Financial literacy in children is the primary foundation for proper financial management in the future. Even with increasingly complex economic and financial developments, such as the emergence of the digital market, digital money demands financial literacy in children, which should be more optimal. The National Council on Economic Education (NCEE) and the National Council on Social Studies (NCSS) emphasize that all children must be economically literate for the benefit of the global economy, both today and in the future (Avonita et al., 2021). This is in line with the opinion of the Financial Services Authority (OJK), which states that early age is a golden period in the formation of behavior and habits in children, in which children will pay attention to the behavior of the people around them and will mimic the behaviors of those around them so that financial literacy will be more effective if taught from an early age (Riza et al., 2022).

The urgency of socializing financial literacy from an early age through the world of education is expected to be able to minimize such negative impacts in the future. Financial literacy helps students understand basic financial concepts such as savings, incomes, expenditures, and investments. The knowledge and understanding built from an early age help students make financial decisions more wisely so that they can recognize potential opportunities and threats, as well as financial fraud, and understand the risks of unfair financial investment offers. Financial literacy is part of the six school literacy movements that were implemented in 2015 through the school literature movement (Nudiati & Sudiapermana, 2020). Self-education can be obtained in both formal and non-formal ways through family education at home, namely parental care and school learning (Haerullah & Elihami, 2020).

School learning can be divided into three activities: intra-school, co-school and extracurricular, both inside and outside the classroom (Hakim & Herlina, 2018). Financial literacy implanted from an early age, either through family education or school, or even in an accidental environment, can give birth to an economically intelligent individual (Hidajat, 2016). Financial literacy is one of the pieces of literature developed by the Buddhist community. This literature aims to have a positive influence on one's finances (Ulfah et al., 2021). Financial literacy in the education of students can be divided into four concepts: acquiring, saving, spending, and donating. The first concept the student can be given is an understanding of the source of income, whether it is routinely accepted as pocket money or obtained from the results of the enterprise. In this case, the teacher can give lessons both in the social field of economic activities and mathematics for the calculation of money.

The second concept is to save, which can be done by giving an understanding of the savings activities both personally and through the bank. The third concept can be connected with the lesson material needs and desires in the material of social sciences. It is expected that the student will avoid consumer attitudes that can have a negative influence on the emergence of the nature of boros in the student. The final concept is that donations can be given through participation in social activities, both in terms of understanding and practice, directly or indirectly (Laila et al., 2019).

Financial literacy can be integrated into school subjects; otherwise, the effectiveness of such integration depends on the teacher's competence in choosing a suitable learning model (Dikdasmen, 2017). Teachers should first understand the terms, concepts, and purposes of financial literacy to be integrated into the subject so that they can choose a model that suits the

characteristics of the student. Each stage in the model chosen by the teacher should be able to facilitate the purpose of financial literacy and focus on the student so that the student gains an understanding and good practice in doing financial literacy based on the experience or learning process carried out in the classroom (Asrofi & Mustikawati, 2020).

Previous research on financial literacy in primary school results in the finding that financial literacy education can be done through the submission of policies of the school literacy movement through entrepreneurial activities, business workshops, and outputs, as well as focusing on basic competencies in learning that have relevance to financial literacy. Besides, it can also be through learning social sciences in the material part of the role of economics in the effort to smooth life in the social environment, of course supported by the media model and appropriate methods. Procurement of fictional and non-fiction books with financial literacy content as well as media in both games and videos. Finally, you can also partner with the bank to open the student savings book (Laila et al., 2019). The second study was conducted to identify financial literacy in one of the schools by mapping the activities of literacy movements into three aspects, namely class-based, school culture, and society. The results of the study found that the economic literacy movement in schools has not gone well due to the lack of application of financial literacy values in learning, as well as programs of activities and books supporting both fiction and non-fiction to shape a culture of financial literacy in schools, and minimal support from the community and the involvement of parents in shaping the financial literacy of pupils (Ulfah et al., 2021).

Further research explains that financial literacy can be carried out through entrepreneurship-based literature by adding to the learning load through entrepreneurship activities, mapping basic competencies in subjects of Indonesian language, social sciences, and natural sciences that have relevance to entrepreneurship, and holding a "Cha-Ching" program in collaboration with Prudential foundation to provide an understanding of the importance of financial regulation from an early age (Aryanto et al., 2022). The research carried out has a difference from the previous research, which focuses on the cultivation of financial literacy through one of the learning models called Read, Answer, Discuss, Explain, and Create (RADEC), which the researchers selected based on the study that the RADEC model has the potential to instill financial literacy in the pupils with their own stages.

The model used by researchers in providing financial literacy education to pupils is the RADEC model (Read, Answer, Discuss, Explain, and Create). This model has a stage in which pupils not only study at school but also come to school to sharpen and validate knowledge acquired at home by reading material and answering pre-learning questions (Yulianti et al., 2022). This model gives students the opportunity to search extensively for sources, not only from textbooks but from other sources such as online media, or search for information through interviews with specific sources already designated by the teacher. The RADEC model is a new innovation that is adapted to the characteristics of students in Indonesia and aims to train the independence of students, improve the literacy of learners, facilitate students to participate actively in learning, and connect the learned material to be applied effectively.

Learners get complex learning starting from the read and answer stages at home before learning takes place, followed by discuss, explain, and create in the final stages (Sopandi, 2017). A survey of educators who have been trained in using the RADEC model found that 97.2% have an interest in using RADEC as an easy-to-understand learning model that can provide impetus in building student character and be able to provide students with conceptual understanding as well as motivation in developing 21st century competence (Handayani et al., 2019). The teacher's concept of providing financial literacy learning to students through the RADEC model can be achieved by choosing the appropriate material so that financial literacy concepts can be easily integrated before integrating concepts in each learning phase. The objective of this study is to provide financial literacy learning to elementary school students in the fourth grade through the learning of RADEC.

## METHOD

This research uses qualitative methods with case study approaches and data collection methods using observations, interviews, and documentation. The subject of this study is class IV, with a total of twenty-three students in one of the primary schools in Bandung City. The method of data analysis using description analysis is to be subsequently presented in the form of a narrative (Cresswell, 1998). The research phase, according to Miles and Huberman, begins with building research concepts, formulating problems, collecting data, analyzing it, and drawing research conclusions (Murdiyanto, 2020).

## RESULTS

The concept of student financial literacy can be categorized into four categories: acquiring, spending, keeping, and donating finance (Laila et al., 2019). This concept is integrated into the social science subjects in the needs and finance material in the fourth grade of elementary school using the RADEC (Read, answer, discuss, explain, and create) learning model. The reading and answer stages carried out at the teacher's home give instructions to read the IPAS package book of class IV Curriculum Merdeka on Chapter VII about needs and desires, besides also giving students the opportunity to find answers from other sources through interviews with economic actors and online media such as the application Google Search or YouTube.

Pre-learning questions include numeration with the four stories of financial literacy concepts, needs and financial conceptions, personal cash books, and economic activities of the community. In the discussion and explanation phases carried out in groups to exchange ideas both within the group and between the groups, the creation phase gives students the opportunity to create works of one of the alternatives that students can choose, the economic activities of entrepreneurship. Financial literacy of elementary school students in the fourth grade through the RADEC model, after observations and interviews, obtained the following results:

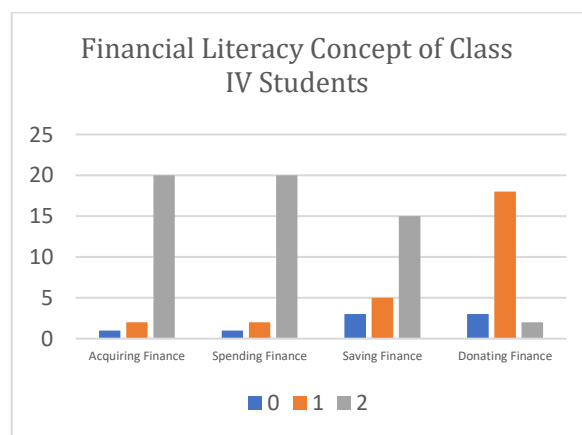


Figure 1. Student Financial Literacy Concept

The first concept is obtaining finance. Fourth grade students are in the very good category, with 87% of them having understood the concept of financial literacy by understanding the terms income and expenditure and their differences. Students also understand the source of income through the subject of stories and filling personal cash books. A personal cash book contains the incomes and expenditures experienced by the characters in the story. In addition, it is also seen in the stage of creation, where students choose economic activities for entrepreneurship. From the activity of creating, students learn the concepts of capital, profits, and losses by summing up expenditures to determine the sale price and obtain income from sales results; the rest are in the category of both students who still have not understood the concept of numeration, and 4% of students have not been able to fill in the pre-learning questions on both financial literacy concepts and numeration.



The second concept is that spending is in the very good category of 87%. It is seen that students can understand the concept of spending from the subject of stories and filling personal cash books in pre-learning questions, then students can classify good things that are needs and desires, seen also in the preparation of materials and tools by summarizing the finances of each group member for the need to make work; the rest are in the good category and still need guidance. The third concept is to save. 65% of the students already understand the concept of saving in pre-learning questions, supported by classroom practice in the personal backbone activities stored in the classroom. The rest is good, with 22% of students already understanding the concept of saving but not routinely implementing it, and 13% still need guidance. The final concept of donating funds of 9% is already very good by giving examples of donation activities as well as purposes for donating; the rest are in the good category of 78%, where students know the concept of a donation but have not understood the purpose of funding, while 13% still need guidance because they have not known the concept and purpose of a financial donation.

The five stages of RADEC are well implemented, where students already have autonomy and responsibility by working on their own pre-learning questions with the help of a variety of resources, especially online media. Students still need to be motivated to be more confident in submitting opinions in the discussion and explanation phase. In the creation phase, by making the student's work choose to sell the product of the group's production of food and beverages made from the money of each group member, students in the group can already determine the sale price and get a profit from the sales to the friends in the class. The group sales process with students in the classroom went fast, where students dared to promote merchandise to attract buyers. Some students choose to make orders outside of class hours because they are motivated to gain the benefit and personal pleasure obtained from shopping activities.

## **DISCUSSION**

Financial literacy of elementary school students in the fourth grade through the RADEC model showed positive results; all four concepts of financial literacy were achieved well, namely, 87% of students were excellent in the category of obtaining and spending finance, 65% excellent in saving finance, and 78% good in the category of donating finance. Financial literacy in the 21st century is one of the major literatures and has an influence on the economic lives of people. In a global world, people are not concerned about the economy because they are satisfied with what they have and do not think of long-term investment and economics, giving rise to the urgency of financial literacy. The birth of digitalization in all aspects of life means that people must be able to master the principles and terms of the financial sphere so that crime and risks in conducting the economy can be minimized. Income for the young generation is a calculation in applying for employment; the workload must be in line with the income earned so that there is a motivation to work with the least freedom and earn the largest income, but it becomes less profitable if it is not offset by the ability to manage income, so that the thinking of the young generation, who have a tendency to buy the things they want without thinking about the future, can be overcome with financial literacy.

Financial literacy aims to have a positive impact on the economy in the digital age with complex challenges such as local or interlocal business competition, the circulation of fake information, the boom of labor, and other global challenges (Saraswati & Nugroho, 2021). Financial literacy provided to students in particular elementary school is expected to strengthen the students' foundations in carrying out good economic activities in future society, provide protection against false information, minimize consumer behavior and bad nature, and train life skills as creative economic actors. RADEC learning gives students the freedom to choose sources widely, either through research through interviews with subjects or through the use of digital technology (Sopandi, 2017). Each stage in RADEC provides an opportunity for students to be centered on learning as subjects experiencing and acquiring knowledge independently, either through the process of reading, investigating, collaborating, or doing practice by creating works (Pratama et al., 2019).

The first phase of reading is done at home before entering school, students read information from various sources including books, other printed information sources and electronic

information sources such as the Internet, this phase helps students to explore themselves in searching for information according to their beliefs, to measure the extent to which students obtain information entered into the Answer phase by answering pre-learning questions prepared by teachers based on their chosen learning access, in guiding students to find information should be based on the material they have learned and pre-Learning questions should range from lower order Thinking (LOT) to High Order Thinking Skill (HOTS) starting from remembering, solving and analyzing problems, and can develop a product plan that will be produced in the later stage of creating. At this stage, students answer pre-learning questions based on knowledge gained from reading activities. They answer questions outside the classroom or at home independently before the class session takes place. This way, students can independently identify which parts of the teaching material are considered easy or difficult (Pratama et al., 2019). Pre-learning questions should be able to facilitate students' understanding of basic finance, where students can identify general financial products and terms, interpret information related to basic financial concepts, recognize the difference between needs and desires, and make simple decisions about daily spending.

The Discuss phase is conducted in school by giving each student the opportunity to discuss each other in a group, determine the correct answers, and choose the answers that are considered most correct in the group before discussing with one class in another group. The explain phase, that is to say, explains, can give the group members an opportunity to speak in front of the class, appreciate each other's answers in the other group, and discuss which answers will be chosen as class answers. The create phase in RADEC has several choices that teachers can make, namely, the creation of papers, research, and problem solving. Three can be chosen according to the characteristics of the material and the students in the class (Handayani et al., 2019). This phase encourages and inspires students to use the knowledge acquired in solving final problems. Teachers can give examples of creative products that will later be realized by students through the phases of planning, implementation, reporting, and presentation of work in various forms (Kusumaningpuri & Fauziati, 2021).

These five stages are expected to foster financial literacy in students. Input and expenditure concepts can be the basis for introducing financial literature to students, as well as the provision of material needs and finances. Additionally, financial applications such as cash books, savings, storage locks, and other applications can be provided either digitally with mobile phones or in the form of books (Irfani, 2020). The student's financial intelligence can be acquired when the student already has good financial literacy and numeration literacy through financial management, saving, and obtaining finance through business activities (Laila et al., 2019). The teacher can learn financial literature by making a spending plan and also by creating a journal or story about the student's experience buying something needed, so that as soon as possible at his age, the student will be able to make a financial settlement plan independently (Dikdasmen, 2017)

## CONCLUSION

Financial literacy of elementary school students in the fourth grade through the RADEC model showed positive results; all four concepts of financial literacy were achieved well, namely, 87% of students were excellent in the category of obtaining and spending finance, 65% excellent in saving finance, and 78% good in the category of donating finance. The stages of the RADEC model give students the opportunity to acquire and build their own knowledge either individually by visiting a wide range of resources or through discussions both within and between groups.

## REFERENCES

- Aryanto, S., Hartati, T., Maftuh, B., & Darmawan, D. (2022). Sastra anak berbasis ecopreneurship sebagai muatan pembelajaran literasi finansial di Sekolah Dasar. *Jurnal Cakrawala Pendas*, 8(3), 722–737. <https://ejournal.unma.ac.id/index.php/cp/article/view/2569>
- Asrofi, M., & Mustikawati, E. (2020). Menumbuhkan Literasi Keuangan Melalui Progam Market Day di SDIT Lukman AlHakim Internasional. *An Nur: Jurnal Studi Islam*, 12(2), 185–208. <https://jurnalannur.ac.id/index.php/An-Nur/article/view/83>
- Avonita, O. L., Tsalimna, U. M., Nisa, L., & Putri, B. (2021). Urgensi Literasi Keuangan Usia Dini. *Abdi*

- Psikonomi*, 2(3), 143–150.  
<https://journals2.ums.ac.id/index.php/abdipsikonomi/article/view/349>
- Cresswell, J. (1998). *Metode Analisis Data dengan Analisis Deskripsi*. Sage Publications.
- Dikdasmen. (2017). *Materi Pendukung Literasi Finansial*. Kementerian Pendidikan dan Kebudayaan Republik Indonesia.
- Haerullah, H., & Elihami, E. (2020). Dimensi perkembangan pendidikan formal dan non formal. *Jurnal edukasi nonformal*, 1(1), 199–207. <https://ummaspul.e-journal.id/JENFOL/article/view/504>
- Hakim, A., & Herlina, N. H. (2018). Manajemen Kurikulum Terpadu Di Pondok Pesantren Modern Daarul Huda Banjar. *Jurnal Penelitian Pendidikan Islam*, 6(1), 111. <https://www.riset-iaid.net/index.php/jppi/article/view/157>
- Handayani, H., Sopandi, W., Syaodih, E., Setiawan, D., & Suhendra, I. (2019). Dampak perlakuan model pembelajaran RADEC bagi calon guru terhadap kemampuan merencanakan pembelajaran di sekolah dasar. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, 4(1), 79–93. <https://journal.unpas.ac.id/index.php/pendas/article/view/1857>
- Hidajat, T. (2016). *Literasi keuangan*. STIE Bank BPD Jateng.
- Hikmah, Y. (2020). Literasi keuangan pada siswa sekolah dasar di kota Depok, provinsi Jawa Barat, Indonesia. *Jurnal Pengabdian Kepada Masyarakat*, 26(2), 103–108. <https://jurnal.unimed.ac.id/2012/index.php/jpkm/article/view/16780>
- Irfani, A. S. (2020). *Manajemen Keuangan dan Bisnis; Teori dan Aplikasi*. Gramedia Pustaka Utama.
- Kusumaningpuri, A. R., & Fauziati, E. (2021). Model Pembelajaran RADEC dalam Perspektif Filsafat Konstruktivisme Vygotsky. *Jurnal Papeda: Jurnal Publikasi Pendidikan Dasar*, 3(2), 103–111. <https://doi.org/10.36232/jurnalpendidikdasar.v3i2.1169>
- Kusumaningrum, S. M., Wiyono, G., & Maulida, A. (2023). Pengaruh Literasi Keuangan, Inklusi Keuangan, dan Sikap Keuangan terhadap Pengelolaan Keuangan UMKM di Kapanewon Godean, Kabupaten Sleman. *Jurnal Samudra Ekonomi dan Bisnis*, 14(2), 227–238. <https://www.ejurnalunsam.id/index.php/jseb/article/view/6867>
- Laila, V., Hadi, S., & Subanji, S. (2019). Pelaksanaan pendidikan literasi finansial pada siswa sekolah dasar. *Jurnal Pendidikan: Teori, Penelitian, Dan Pengembangan*, 4(11), 1491–1495. <http://journal.um.ac.id/index.php/jptpp/article/view/13016>
- Murdiyanto, E. (2020). *Penelitian Kualitatif (Teori dan Aplikasi disertai Contoh Proposal)* (1 ed.). Lembaga Penelitian dan Pengabdian Pada Masyarakat UPN "Veteran" Yogyakarta Press.
- Nudiati, D., & Sudiapermana, E. (2020). Literasi sebagai kecakapan hidup abad 21 pada mahasiswa. *Indonesian Journal of Learning Education and Counseling*, 3(1), 34–40. <https://journal.ilinstitute.com/index.php/IJoLEC/article/view/561>
- OtoritasJasaKeuangan. (2020). *2021-2025 National Strategy On Indonesia Financial Literacy*. OJK. <https://www.ojk.go.id/iru/policy/detailpolicy/9625/press-release-2022-national-financial-literacy-and-inclusion-survey>
- Pratama, Y. A., Sopandi, W., & Hidayah, Y. (2019). RADEC Learning Model (Read-Answer-Discuss-Explain And Create): The Importance of Building Critical Thinking Skills In Indonesian Context. *International Journal for Educational and Vocational Studies*, 1(2), 109–115. <https://ojs.unimal.ac.id/ijevs/article/view/1379>
- Riza, I. F. D., Azizah, H., Sofiana, Y., Ummami, U., & Andila, A. (2022). Pentingnya Edukasi Literasi Keuangan pada Anak Usia Dini Melalui Gerakan Gemar Menabung. *Prosiding Seminar Nasional Hi-Tech (Humanity, Health, Technology)*, 1(1). <https://ejournal.unuja.ac.id/index.php/hitech/article/view/4428>
- Saraswati, A. M., & Nugroho, A. W. (2021). Perencanaan Keuangan dan Pengelolaan Keuangan Generasi Z di Masa Pandemi Covid 19 melalui Penguatan Literasi Keuangan. *Warta LPM*, 24(2), 309–318. <https://journals.ums.ac.id/index.php/warta/article/view/13481>
- Sopandi, W. (2017). The quality improvement of learning processes and achievements through the read-answer-discuss-explain-and create learning model implementation. *Proceeding 8th Pedagogy International Seminar 2017: Enhancement of Pedagogy in Cultural Diversity Toward Excellence in Education*, 132–139. [https://www.researchgate.net/profile/Wahyu-Sopandi/publication/320281816\\_THE\\_QUALITY\\_IMPROVEMENT\\_OF\\_LEARNING\\_PROCESS](https://www.researchgate.net/profile/Wahyu-Sopandi/publication/320281816_THE_QUALITY_IMPROVEMENT_OF_LEARNING_PROCESS)

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- Ulfah, M., Kuswanti, H., & Thoharudin, M. (2021). Pendidikan literasi keuangan dalam pembelajaran ekonomi di sma dan smk kabupaten kubu raya kalimantan barat. *Jurnal Kependidikan: Jurnal Hasil Penelitian dan Kajian Kepustakaan di Bidang Pendidikan, Pengajaran dan Pembelajaran*, 7(1), 194–204. <http://e-journal.undikma.ac.id/index.php/jurnalkependidikan/article/view/3155>
- Yulianti, Y., Lestari, H., & Rahmawati, I. (2022). Penerapan Model Pembelajaran Radec Terhadap Peningkatan Kemampuan Berpikir Kritis Siswa. *Jurnal Cakrawala Pendas*, 8(1), 47–56. <https://unma.ac.id/jurnal/index.php/CP/article/view/3350>