



A SYSTEMATIC REVIEW OF THE CHARACTER OF TOLERANCE IN PHYSICS LEARNING

Flor Amara Avila^{1,*}, Wanada Siti Salsabilah², Elza Triani³

¹ Basic Science Program, University College Mayor of Cundinamarca, Bogota, Colombia

² Faculty of Teaching and Education, Universitas Islam Negeri Sultan Thaha Saifuddin, Jambi, Indonesia

³ Faculty of Teaching and Education, Universitas Jambi, Jambi, Indonesia

Corresponding author email: floramaría@gmail.com

Article Info

Received: 10 Oct 2023

Revised: 14 Nov 2023

Accepted: 23 Nov 2023

OnlineVersion: 30 Nov 2023

Abstract :

This research is the first to systematically review the concept of tolerance character in the context of physics learning. The research explores the definition, measurement, and development of tolerance character among high school students through physics learning. The method used in this research is the literature review method. Sampling in this study was carried out by looking for several scientific articles from previous research on the character of tolerance found on Google Scholar, which were then examined and conclusions drawn. Results of the analysis of articles regarding the character of tolerance in learning physics in high school found that the character of tolerance is a character that needs to be instilled in students at the high school education level through learning physics. The research also identified the benefits, challenges, and strategies of fostering tolerance in physics learning, such as enhancing students' critical thinking, communication, and collaboration skills, overcoming misconceptions and stereotypes, and using inquiry-based, problem-based, and cooperative learning methods. This character of tolerance can be taught and applied in education through learning, one of which is learning physics. The novelty of this research is that it provides a comprehensive and systematic overview of the existing literature on the concept of tolerance character in the context of physics learning. The research also contributes to the literature on physics education and character education by highlighting the role of physics learning in enhancing the tolerance character of high school students.

Keywords: Physics Learning, Senior High School, Tolerance Character

This is open access article under the [CC BY-NC-SA](https://creativecommons.org/licenses/by-nc-sa/4.0/) license



INTRODUCTION

Physics is one of the science subjects taught at the high school level, which teaches students about natural phenomena that occur in everyday life and can also be explained mathematically. Physics

is a branch of natural science that studies natural phenomena (Suari, 2017; MaurerC., & Gellera, 2020; Irawati & Ningsi, 2022). This is in line with the opinion of Winarti et al. (2021); Dinata and Yuliani (2022), and Mulyati et al. (2023), namely, Learning Physics is that convey concepts that are translated through mathematical equations; these mathematical equations have the function of explaining symptoms nature studied in physics. Another opinion states that learning physics is learning that applies everyday life to the principles of physics (Joshua et al., 2019; Brookes et al., 2020; Widjaja, 2021; Delie et al., 2023). Based on this opinion, learning physics is learning that provides knowledge about natural phenomena that can be explained mathematically in the form of calculations. Even so, in carrying out physics learning as a country that upholds ethics, students must have good character in each subject's learning process. Character education is not only applied to subjects of Religious and Citizenship Education but must also be applied to physics subjects.

If character education is not applied to all subjects, including physics lessons, it will impact students' character crisis. Physics must help prepare the next generation of Indonesians with strong character. Character education is a conscious effort that is planned and directed through a learning environment for the growth and development of human potential that has good character and personality, has good morals, and has a positive and constructive effect on nature and society (Sholekah, 2020; Fahdini et al., 2021; Marpuah, 2022; Budiarti et al., 2022). Character education is considered to have a role as a printer for the morals of the Indonesian nation through education. A moral attitude asks the world of education to formulate the concept of character education in the form of several character values that will be taught to students (Fadilah et al., 2021; Ernawati et al., 2022; Nugraheni et al., 2022; McGrath et al., 2022). Planting character education values such as being religious, honest, tolerant, disciplined, hardworking, smart working, creative, independent, democratic, curiosity, national spirit, love of the motherland, appreciating achievement, friendly or communicative, love peace, love to read, social care, environmental care, and responsibility are ways to build a dignified nation, and this requires a habituation process from early childhood to adulthood (Baginda, 2018; Fahroji, 2020; Ningsi & Somantri, 2021; Vertelyte, & Staunæs, 2021) The purpose of instilling character education is to develop a person's ability to weigh and decide something good or bad, maintain and realize the goodness in everyday life consciously and wholeheartedly.

Instilling character values is very much needed in education, which must be carried out continuously and continuously or habituation in learning to attach character building to students (Rahmawati & Harmanto, 2020; Ningsih, 2022; Zulela et al., 2022). In the world of education, adolescent deviant behavior that shows moral decadence is demonstrated by the large number of them involved in drugs, promiscuity, brawls, and thuggery. It is necessary to develop the character of tolerance, which is even more enhanced to overcome all problems and prevent all causes of conflict and even problems caused by intolerance. Tolerance is an attitude and action that respects differences in religion, ethnicity, opinions, attitudes, and actions of others who are different from oneself (Pitaloka et al., 2021; Metcalfe, & Moulin-Stožek, 2021; Saputri, 2022). The character of tolerance is an important character that must be formed in every individual who lives in Indonesia because when someone has a character of tolerance for harmony above differences, it can be appropriately formed so that Indonesia becomes a developed and prosperous country (Komariah, 2020; Widiatmaka & Purwoko, 2021; Jordan, 2022; Wirayuda et al., 2022). For this reason, it is instilled in students to have the character of tolerance in their lives to live in society.

RESEARCH METHOD

The method used in this research is the literature review method. The literature review is a technique for proving or approaching certain problems, or it can be said that literature review is a scientific process that produces output in the form of reports intended to conduct scientific research or focus on a study (Jufri & Srimadona, 2022; Yulianti et al., 2022; Castro, 2023). In simple terms, a literature review is an activity that focuses on a specific topic of interest for critical analysis of the contents of the text being studied (Wahyuni, 2022; Kamid et al., 2022; Mahlida et al, 2022). A literature review generally aims to describe the purpose of the review, suggest how the article should be evaluated, and identify common errors in the article (Purwanto et al., 2020; Afriyanty & Yolviyansyah, 2021; Astalini et al., 2022).

Sampling in this study was carried out by looking for several scientific articles from previous research on the character of tolerance found on Google Scholar, which were then examined and conclusions drawn. This article discusses the character of tolerance in learning physics. There are 14 articles reviewed by researchers that focus on the topics studied. The steps in conducting a literature review in this study are as follows: 1) Define keywords as primary search; 2) Search for literature on Google Scholar with the keyword “Character of Tolerance in Learning Physics”; 3) Then select articles related to keywords with high school research subjects; 4) Then the articles obtained are reviewed by reading and noting the name of the journal, research title, author and year of publication, as well as the research findings obtained.

The analysis technique is carried out using a synthesis matrix. The synthesis matrix is a table/diagram that allows researchers to group and classify arguments from several articles and combine different elements to get an overall impression/conclusion of the whole article (Murniati et al., 2018; Aldila & Mundarti, 2023). In this study, the researcher made a table of the journal's name, author (year), title, and findings.

Data is selected through identification, screening, eligibility, and inclusion. The study discovery process followed PRISMA rules, as presented in Figure 1.

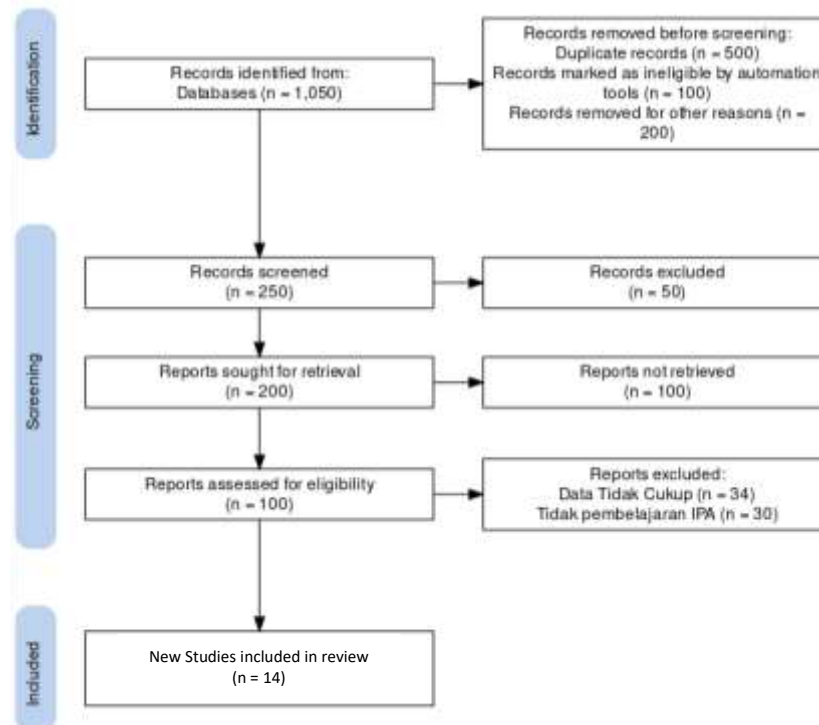


Figure 1. Literature Review Flowchart

RESULTS AND DISCUSSION

The Reviews of scientific articles are based on the topics studied related to tolerance in physics learning in high school. The results of a review of articles regarding this research are in Table 1.

Table 1. Results of article analysis regarding the character of tolerance in physics learning in high school

| Journal Name | Author and Year Rise | Title | Findings |
|--------------|---------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Radiation | Anggraheni et al., (2015) | Development Instrument Evaluation Authentic for Measure Social Attitude of Participants Class X | Response participants educated on the learning process with the use of authentic evaluation got a score of 85.8%. Thus the Assessment Sheet Authentic for Measure Social Attitude of Participants Educate one of them |

| Journal Name | Author and Year Rise | Title | Findings |
|---------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | High School Students in Learning Physics | character tolerance for students in high school class X in Physics Subject worthy used as instrument evaluation in learning physics. |
| Journal Learning Physics | Wahyuningsih et al., (2016) | Development Instrument Self-Assessment Web Based for Evaluate Attitude Science in Learning Physics at SMA | Based on the results analysis of the data obtained so can be concluded that: based on the results of self-assessment, 61.90% of students' own attitudes are scientific with category well and 28.10% of students' very good category. Most students feel Good about behaving tolerance and less about behaving by being honest and trusting themselves. |
| Proceedings of the 2016 MIPA National Seminar (Undiksha) | Santayasa, (2016) | Exploration of Character Values, Social Attitudes, and Spiritual Attitudes on Concepts and Principles Physics | Research results show that values education character, attitude social, and spiritual attitudes are sourced from religion, Pancasila, culture, and goals education nationally explored on concepts and principles units, vectors, inertia, motion, friction, magnetism, elasticity, electricity, and atoms. |
| ATLANTIS PRESS International Conference on Educational Research and Innovation (ICERI 2019) | Evelin & Utami, (2020) | Effectiveness of Interactive Physics Mobile Learning with Scaffolding Approach to Improve Students' Tolerance and Students' Self-Regulated Learning | Research results show enhancement in tolerance students and self-regulated learning; the acquisition score of tolerance students in the class experiment of 0.19 proves this. The value is higher than the gain score in the class control, which is only 0.08 |
| Journal Physics: Conference Series | Romanvica et al., (2020) | Development of learning media game traditional based crank dor achievement mastery material and attitude tolerance | Attitude tolerance students with the use of learning-based learning media game traditional crank reached, is shown with results analysis sheet observation using IJA of 98% or reached. |
| Journal Evaluation in Education (JEE) | Afrianty & Yolfiansyah, (2020) | Analysis Influence Attitude Tolerance Against Learning Outcomes Student Physics in Class XII IPA SMA Negeri 2 Jambi City | Result of study This is based on the hypothesis test performed using the correlation test, which showed that attitude tolerance students to results Study physics XII IPA at SMA Negeri 2 Jambi City has a very significant effect, meaning There is a connection between attitude tolerance to results Study physics. |
| Journal Study Educational Sciences | Sari, (2020) | Analysis attitude tolerance learn science | Using variable class VII F, as many as 30 respondents obtained the highest score, 96, and the lowest score, 56, with |

| Journal Name | Author and Year Rise | Title | Findings |
|------------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | students school medium First | an average (mean) of 84.16. Students' attitudes and tolerance during the science learning process in class prove that students can value the differences between every individual. |
| Journal of Education Research University | Darmaji et al., (2020) | Investigation Psychology Student: Relations between Attitude, Persistence, Creativity, and Tolerance Against Science Subjects | Then, attitude students to persistence, creativity, and tolerance in the eye Science lessons at Jambi City Middle School have a positive relationship with category strong. Likewise, the attitude students to persistence, creativity, and tolerance in the eye science lessons at SMP Batanghari Regency has a positive relationship with category-strong |
| JINOTEP (Journal Innovation and Technology Learner) | Gustiawan, (2021) | Use Peer Tutor Method for Increase Enthusiastic Student Smk In Study Physics | Research results show there is enhancement liveliness in the average attitude students have on the learning process, material, the way the teacher conveys material, understanding, and evaluation of learning physics. With these, students have a high tolerance for the existence of peer tutors and also a sense of mutual help. |
| JKO (Journal Creative Online) | Ni,mah et al., (2022) | Analysis Character Tolerance in Learning Temperature and Heat based Culture Local Ruwatan Dreadlocks _ | The study shows that several characters may improve tolerance through learning temperature and heat with based culture local maintenance dreadlocks ie, the characters value differences, peace, awareness, and love of culture alone. |
| PHYDAGOGI C (Journal Physics and Learning) | Rifyal et al., (2022) | Character Education In Learning Physics: Optical Instruments Material | Every teacher should be capable of choosing the right learning model for the participants to reach objective learning. Besides that, integration strengthening education character must apply to each eye lesson in each institution, especially in learning physics. |
| Integrated Science Education Journal (ISEJ) | Putri, Pisanaji, and Ramadhani, (2022) | identify Characteristics Attitude Tolerance To Student Class X at SMAN 7 Batang Hari | Student class X at SMA N 7 Batang Hari has a character attitude and very good tolerance. With so, can said that education character about attitude tolerance has Already been instilled in SMA N 7 Batang Hari. In education, attitude tolerance is very important to students, for form character, students become more well and more honored of existing differences. |

| Journal Name | Author and Year Rise | Title | Findings |
|--------------------------------------|------------------------------|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Journal Scientific Elementary School | Asrial et al., (2022) | Deep Digital E-Assessment Technology Evaluate Character Tolerance Student | Evaluation of character tolerance students is in the category of good, and there is a difference from character tolerance students in 3 schools. The result of validation media experts on development evaluation web-based is in the category Good so that the product can used for evaluating character tolerance among students. |
| Pensa E-Journal: Science Education | Rachmawati & Subekti, (2022) | Enhancement Ability Think Critical and Development Attitude Tolerance with Using a Cybergogy Strategy | Study This shows there is an enhanced ability attitude tolerance students obtain very tolerant category. The results of the study. This cybergogy strategy can increase students' ability to think critically and develop attitude tolerance. |

Based on Table 1, namely the results of the analysis of articles regarding the character of tolerance in learning physics in high school, it was found that the character of tolerance is a character that needs to be instilled in students at the high school education level through learning physics. Based on the review of the articles conducted, various efforts were made to improve and strengthen the tolerance character of students, both by using multiple learning media and learning models or strategies as well as through learning materials or topics. By having the character of tolerance, students will have mutual respect for differences and help each other (Razak, 2020; Dewi et al., 2021; Kamid et al., 2022; Alhazmi, 2023). The importance of forming a character of tolerance by accepting differences and changing the paradigm of uniformity into diversity by acknowledging the rights of others, respecting and appreciating other cultures and religions that exist within the community (Anang & Zuhroh, 2019; Dewi et al., 2022; Moosavi, 2022; Doblun, 2023; Metcalfe et al., 2023). Instilling the value of tolerance from an early age, since school age, is expected to make the next generation of the Indonesian nation into human beings who have an attitude of tolerance so that divisions do not occur due to differences in society, considering that Indonesia is a country with a great diversity of ethnicities, languages, religions. That way, teaching tolerance in every subject, such as physics, is very good.

The importance of character education is that through good character education, the younger generation is expected to develop into strong, intelligent, and good Indonesian people (Putri et al., 2018; Hardiyanti et al., 2018; Putri & Simbolon, 2022). Even though some teachers or other people think that physics learning should focus on teaching physics materials and character education is not an obligation for physics teachers to teach it, that is a wrong assumption. To improve the character of this nation, all parties can be involved, including education through teachers and students.

The novelty of this research is to analyze how tolerance can be applied in learning physics to improve students' character by conducting a literature review, where no research has been conducted regarding the character of tolerance in learning physics in high school. So that this research can be known more deeply, completely, briefly, and based on a literature study of existing previous articles. It provides a comprehensive and systematic overview of the existing literature on the concept of tolerance character in the context of physics learning. The study also identifies the benefits, challenges, and strategies of fostering tolerance in physics learning, such as enhancing students' critical thinking, communication, and collaboration skills, overcoming misconceptions and stereotypes, and using inquiry-based, problem-based, and cooperative learning methods. The study contributes to the literature on physics education and character education by highlighting the role of physics learning in enhancing the tolerance character of high school students. The limitation of this study is that it only relies on secondary data from previous studies, and it does not measure the actual impact of physics learning on the tolerance character of students. Future research may conduct empirical studies to test the effectiveness and feasibility of physics learning in developing the tolerance character of students.

A Systematic Review of the Character ... (Flor Amara Avila, et al) pp:300-310

This research is essential because it can direct further research by identifying relevant reference sources that can be used. The implications of this research are that it can provide information for readers or researchers who wish to research the importance of the character of tolerance for students which can be improved in learning physics. With this research, it is hoped that future researchers will be able to collect and analyze relevant and systematic articles. The novelty of this research is that it can provide an overview of the tolerance character of students, which can be improved in learning physics through methods, media, or physics subject matter.

CONCLUSION

Based on the results and discussion above, character education is something that must be implemented as early as possible both through the community environment and the school environment. One of the characters that needs to be instilled and improved is the character of tolerance. By instilling the character of tolerance, it is hoped that this nation's generation can respect each other's differences in culture, religion, ethnicity, and language which are very diverse in Indonesia. This character of tolerance can be taught and applied in the field of education through learning, one of which is learning physics.

ACKNOWLEDGMENTS

The researcher would like to thank all parties who have permitted the researchers and helped researchers in this study.

REFERENCES

- Afrianty, N., & Yolviansyah, F. (2021). Analisis pengaruh sikap toleransi terhadap hasil belajar siswa fisika di kelas XII IPA SMA Negeri 2 Kota Jambi [Analysis of the influence of tolerance on the learning outcomes of physics students in class XII Science at SMA Negeri 2 Jambi City]. *Journal Evaluation in Education (JEE)*, 2(4), 144-147. <https://doi.org/10.37251/jee.v2i4.244>
- Aldila, F. T., & Mundarti, S. (2023). Development of an affective assessment instrument based on krathwohl-anderson taxonomy in class XI SMA Negeri Titian Teras Jambi. *Journal Evaluation in Education (JEE)*, 4(2), 75-80. <https://doi.org/10.37251/jee.v4i2.323>
- Alhazmi, A. A. (2023). Pedagogy of tolerance and violence prevention in the Arab world. *British journal of religious education*, 1-17. <https://doi.org/10.1080/01416200.2023.2254511>
- Anang, & Zuhroh, K. (2019). Nilai-Nilai toleransi antar sesama dan antar umat beragama (Studi Pandangan Kh. Sholeh Bahruddin) [Values of tolerance between people and between religious communities (Study of Kh. Sholeh Bahruddin's views)]. *Multicultural Islamic Education*, 3(1), 41–55. <https://doi.org/10.35891/ims.v3i1.1730>
- Astalini, A., Darmaji, D., Kurniawan, D. A., Widodo, R. I., & Rohana, S. (2022). Junior high school teacher's forum group discussion response on application of Adat Bersendi Syara' Syara' Bersendi Kitabullah in Learning. *Journal Evaluation in Education (JEE)*, 3(4), 102-107. <https://doi.org/10.37251/jee.v3i4.283>
- Baginda, M. (2018). Nilai-nilai pendidikan berbasis karakter pada pendidikan dasar dan menengah [The values of character-based education in primary and secondary education]. *Jurnal Ilmiah Iqra'*, 10(2). <http://dx.doi.org/10.30984/jii.v10i2.593>
- Brookes, D. T., Ektina, E., & Planinsic, G. (2020). Implementing an epistemologically authentic approach to student-centered inquiry learning. *Physical Review Physics Education Research*, 16(2), 020148. <https://doi.org/10.1103/PhysRevPhysEducRes.16.020148>
- Budiarti, R. S., Kurniawan, D. A., & Rohana, S. (2022). A comparison by Gender: Interest and science process skills. *Journal of Education Research and Evaluation*, 6(1), 88–97. <https://doi.org/10.23887/jere.v6i1.37723>
- Castro, E. A. M. (2023). Analysis of problem solving ability of first middle school students in learning science. *Integrated Science Education Journal*, 4(2), 43-53. <https://doi.org/10.37251/isej.v4i2.329>
- Delie, J., Edwards, J., & Biedenweg, K. (2023). Using psychometrics to characterize the cognitive antecedents of tolerance for black bears. *Human Dimensions of Wildlife*, 28(5), 435-452. <https://doi.org/10.1080/10871209.2022.2077481>

- Dewi, I. A. P. M. P., Dewi, K. S. U., & Kiriana, I. N. (2022). Moderasi beragama dalam keluarga hindu untuk pembentukan sikap toleransi kepada anak usia dini: Religious moderation [Religious moderation in Hindu families for the formation of an attitude of tolerance towards young children: Religious moderation]. *JAPAM (Jurnal Pendidikan Agama)*, 2(2), 148-159. <https://doi.org/10.25078/japam.v2i02.712>
- Dinata, D., & Yuliani, H. (2022). Studi literatur penerapan model pembelajaran discovery learning pada mata pelajaran fisika di pembelajaran SMP [Literature study on the application of the discovery learning model to physics subjects in junior high school learning]. *Jurnal Pendidikan dan Pembelajaran IPA Indonesia*, 12(2), 49-55. <https://doi.org/10.23887/jppii.v12i2.56551>
- Doblon, M. G. B. (2023). Senior high school students' multiple intelligences and their relationship with academic achievement in science. *Integrated Science Education Journal*, 4(1), 01-08. <https://doi.org/10.37251/isej.v4i1.298>
- Ernawati, M. D. W., Asrial, A., Perdana, R., Septi, S. E., Rohana, S., & Nawahdani, A. M. (2022). Evaluation of students' interest, attitudes, and science process skills in science subjects. *Journal of Education Research and Evaluation*, 6(1), 181–194. <https://doi.org/10.23887/jere.v6i1.37583>
- Fadilah, M. P., Alim, W. S., Zumrudiana, A., Lestari, I. W., Baidawi, A., Elisanti, A. D., & KM, S. (2021). *Pendidikan Karakter [Character building]*. Agrapana Media.
- Fahroji, O. (2020). Implementasi pendidikan karakter: Penelitian di SMP Islam Al-Azhar 11 Kota Serang dan SMP Islam Terpadu Raudhatul Jannah Kota Cilegon [Implementation of character education: Research at Al-Azhar 11 Islamic Middle School, Serang City and Raudhatul Jannah Integrated Islamic Middle School, Cilegon City]. *Qathrunâ*, 7(1), 61-82. <https://doi.org/10.32678/qathruna.v7i1.3030>
- Fahdini, A. M., Furnamasari, Y. F., & Dewi, D. A. (2021). Urgensi Pendidikan Karakter dalam Mengatasi Krisis Moral di Kalangan Siswa [The Urgency of Character Education in Overcoming the Moral Crisis Among Students]. *Jurnal Pendidikan Tambusai*, 5(3), 9390-9394. <https://doi.org/10.31004/jptam.v5i3.2485>
- Hardiyanti, K., Astalini, A., & Kurniawan, D. A. (2018). Sikap siswa terhadap mata pelajaran fisika di SMA Negeri 5 Muaro Jambi [Students' attitudes towards physics subjects at SMA Negeri 5 Muaro Jambi]. *EduFisika: Jurnal Pendidikan Fisika*, 3(2), 1-12. <https://doi.org/10.59052/edufisika.v3i2.4522>
- Irawati, I., & Ningsi, A. P. (2021). Description of Science Process Skills of Physics Education Students of Jambi University on Refraction Material on Concave Lenses Using E-Module. *Integrated Science Education Journal*, 2(1), 34-40. <https://doi.org/10.37251/isej.v2i1.124>
- Jordan, K. (2022). The feasibility of integrating insights from character education and sustainability education—A delphi study. *British Journal of Educational Studies*, 70(1), 39-63. <https://doi.org/10.1080/00071005.2021.1897519>
- Jufri, S. F., & Srimadona, A. (2022). Analysis of the implementation of the discovery learning model and its effect on creative attitudes in solubility learning in class XI MIA SMAN 2 Jambi City. *Integrated Science Education Journal*, 3(3), 78-85. <https://doi.org/10.37251/isej.v3i3.278>
- Kamid, K., Rohati, R., Hobri, H., Triani, E., Rohana, S., & Pratama, W. A. (2022). Process skill and student's interest for mathematics learning : Playing a traditional games. *Internasional Journal of Instruction*, 15(3), 967–988. <https://doi.org/10.29333/iji.2022.15352a>
- Kamid, K., Sabil, H., Syafmen, W., & Rohana, S. (2022). The Use of Traditional Gundu Games in Improving Student Dicipline in Mathematics. *AL-Ishlah: Jurnal Pendidikan*, 14(3). 3087-3100. <https://doi.org/10.35445/alishlah.v14i3.860>
- Komariah, K. (2020). Pengembangan media pembelajaran dakon bilangan pada pembelajaran matematika: Konsep FPB dan KPK siswa kelas IV Sekolah Dasar [Development of number dakon learning media in mathematics learning: Concept of FPB and KPK for fourth grade elementary school students]. *Journal of Basic Education Research*, 1(2), 62-65. <https://doi.org/10.37251/jber.v1i2.85>
- Marpuah, N. (2022). Nilai-Nilai pendidikan karakter dalam peringatan hari santri [Values of character education in commemorating santri day]. *Islamic Journal of Education*, 1(1), 58-66. <https://doi.org/10.54801/ijed.v1i1.75>

- Maurer, C., & Gellera, G. (2020). Contexts of religious tolerance: New perspectives from early modern Britain and beyond. *Global Intellectual History*, 5(2), 125-136. <https://doi.org/10.1080/23801883.2019.1699869>
- McGrath, R. E., Han, H., Brown, M., & Meindl, P. (2022). What does character education mean to character education experts? A prototype analysis of expert opinions. *Journal of Moral Education*, 51(2), 219-237. <https://doi.org/10.1080/03057240.2020.1862073>
- Metcalfe, J., Kristjánsson, K., & Peterson, A. (2023). Exploring religious education teachers' perspectives on character development and moral virtues, in state-funded, non-faith schools in England. *Journal of Beliefs & Values*, 1-18. <https://doi.org/10.1080/13617672.2023.2186644>
- Metcalfe, J., & Moulin-Stožek, D. (2021). Religious education teachers' perspectives on character education. *British Journal of Religious Education*, 43(3), 349-360. <https://doi.org/10.1080/01416200.2020.1713049>
- Mukti, W. M., & Anggraeni, Z. D. (2020). Media pembelajaran fisika berbasis web menggunakan Google sites pada materi listrik statis [Web-based physics learning media using Google sites on static electricity material]. *FKIP e-Proceeding*, 5(1), 51-59.
- Mulyati, M., Putri, F. I., & Deswalman, D. (2023). Efforts to Improve Student Activities and Outcomes in Physics Learning Using the Two Stay Two Stray Technical Cooperative Learning Model at Senior High School. *Integrated Science Education Journal*, 4(1), 30-35. <https://doi.org/10.37251/isej.v4i1.294>
- Murniarti, E., Nainggolan, B., Panjaitan, H., Pandiangan, L.E.A.M., Widayani, I. D. A. & Dakhi, S. (2018). Writing matrix and assessing literature review: A methodological elements of a scientific project. *Journal of Asian Development*, 4(2), 133-146. <https://doi.org/10.5296/jad.v4i2.13895>
- Moosavi, L. (2022). The myth of academic tolerance: the stigmatisation of East Asian students in Western higher education. *Asian Ethnicity*, 23(3), 484-503. <https://doi.org/10.1080/14631369.2021.1882289>
- Ningsih, I. W. (2022). Hubungan karakter tanggung jawab terhadap hasil belajar pembelajaran tematik [The relationship between the character of responsibility and the learning outcomes of thematic learning]. *Journal of Basic Education Research*, 3(1), 27-31. <https://doi.org/10.37251/jber.v3i1.204>
- Nugraheni, L., Waluyo, H. J., & Wardani, N. E. (2022). The Influence of Wayang Beber (The Legend of Wasis Joyokusumo) as a Character-Based learning media on students' critical thinking ability. *International Journal of Instruction*, 15(3), 267-290. <https://doi.org/10.29333/iji.2022.15315a>
- Nastiti, D. (2020, September). Penanaman karakter toleransi dan pendidikan multikultural di sekolah dalam menghadapi keragaman budaya, ras, dan agama [Instilling the character of tolerance and multicultural education in schools in dealing with cultural, racial and religious diversity]. In *Journal Fascho in Education Conference-Proceedings* (Vol. 1, No. 1).
- Ningsi, L. A., & Somantri, M. (2021). Evaluasi pelaksanaan pendidikan karakter di sekolah dasar alam mahira Bengkulu [Evaluation of the implementation of character education at the Alam Ahlia elementary school, Bengkulu]. *Manajer Pendidikan: Jurnal Ilmiah Manajemen Pendidikan Program Pascasarjana*, 15(3), 48-56. <https://doi.org/10.33369/mapen.v15i3.19713>
- Pitaloka, D. L., Dimiyati, D., & Purwanta, E. (2021). Peran guru dalam menanamkan nilai toleransi pada anak usia dini di Indonesia [The role of teachers in instilling the value of tolerance in young children in Indonesia]. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 5(2), 1696-1705. <https://doi.org/10.31004/obsesi.v5i2.972>
- Purwanto, A., Tukiran, M., Asbari, M., Hyun, C. C., Santoso, P. B., & Wijayanti, L. M. (2020). Model kepemimpinan di lembaga pendidikan: A schematic literature review [Leadership models in educational institutions: A schematic literature review]. *Journal of Industrial Engineering & Management Research*, 1(3), 255-266. <https://doi.org/10.7777/jiemar.v1i3.89>
- Purwati, P., Darisman, D., & Faiz, A. (2022). Tinjauan pustaka: Pentingnya menumbuhkan nilai toleransi dalam praksis Pendidikan [Literature review: The importance of cultivating the value of tolerance in educational practice]. *Jurnal Basicedu*, 6(3), 3729-3735. <https://doi.org/10.31004/basicedu.v6i3.2733>

- Putri, A. R., Maison, M., & Darmaji, D. (2018). Kerjasama dan kekompakan siswa dalam pembelajaran Fisika di kelas XI MIPA SMA Negeri 3 Kota Jambi [Student cooperation and cohesiveness in learning Physics in class XI MIPA SMA Negeri 3 Jambi City]. *EduFisika: Jurnal Pendidikan Fisika*, 3(02), 32-40. <https://doi.org/10.59052/edufisika.v3i2.5552>
- Putri, M. A., & Simbolon, P. A. (2022). Problem solving learning model and its correlation to students' critical thinking ability. *Journal Evaluation in Education (JEE)*, 3(3), 87-91. <https://doi.org/10.37251/jee.v3i3.263>
- Rahmawati, M., & Harmanto, H. (2020). Pembentukan nilai karakter toleransi dalam pembelajaran pendidikan pancasila dan kepembentukan nilai karakter toleransi dalam pembelajaran pendidikan pancasila dan kewarganegaraan bagi siswa tunagrahita [Formation of the character value of tolerance in learning Pancasila education and formation of the character value of tolerance in learning Pancasila and citizenship education for mentally retarded students]. *Journal of Civics and Moral Studies*, 5(1), 59-72. <https://doi.org/10.26740/jcms.v5n1.p59-72>
- Ranto, D. W. P. (2023). *Pengaruh Keadilan Organisasional Terhadap Perilaku Menyimpang Negatif: Systematic Literature Review [The Influence of Organizational Justice on Negative Deviant Behavior: Systematic Literature Review]*, Universitas Islam Indonesia, *Dissertation*. <https://dspace.uui.ac.id/handle/123456789/42540>
- Razak, F. M. (2020). Karakter toleransi siswa pada mata pelajaran IPA di-SMPN 3 Muaro Jambi [Character of student tolerance in science subjects at SMPN 3 Muaro Jambi]. *Integrated Science Education Journal*, 1(1), 01-06. <https://doi.org/10.37251/isej.v1i1.11>
- Rifaâ, A., Prajanti, S. D. W., & Alimi, M. Y. (2017). Pembentukan karakter nasionalisme melalui pembelajaran pendidikan Aswaja pada siswa Madrasah Aliyah Al Asror Semarang [Formation of nationalist character through learning Aswaja education for Madrasah Aliyah Al Asror Semarang students]. *Journal of Educational Social Studies*, 6(1), 7-19. <https://doi.org/10.15294/jess.v6i1.16250>
- Saputri, J. (2021). Pembelajaran tematik: Komparasi karakter peduli lingkungan dan karakter cinta damai [Thematic learning: Comparison of environmentally caring characters and peace-loving characters]. *Journal of Basic Education Research*, 2(3), 79-83. <https://doi.org/10.37251/jber.v2i3.200>
- Sugiarti, R., & Ozay, M. (2022). Integration Of Moderate Islamic Values In Character Education At Anak Saleh Elementary School Malang. *International Journal of Islamic Education, Research and Multiculturalism (IJIEM)*, 4(2), 103-118. <https://doi.org/10.47006/ijiem.v4i2.179>
- Suari, M. (2017). Pemanfaatan arduino nano dalam perancangan media pembelajaran fisika [Utilization of Arduino nano in designing physics learning media]. *Natural Science: Jurnal Penelitian Bidang IPA dan Pendidikan IPA*, 3(2), 474-480. <https://doi.org/10.15548/nsc.v3i2.443>
- Sholekah, F. F. (2020). Pendidikan karakter dalam kurikulum 2013 [Character education in the 2013 curriculum]. *Childhood Education: Jurnal Pendidikan Anak Usia Dini*, 1(1), 1-6. <https://doi.org/10.53515/CJI.2020.1.1.1-6>
- Vertelyte, M., & Staunæs, D. (2021). From tolerance work to pedagogies of unease: affective investments in Danish antiracist education. *Nordic Journal of Studies in Educational Policy*, 7(3), 126-135. <https://doi.org/10.1080/20020317.2021.2003006>
- Widiatmaka, P., & Purwoko, A. A. (2021). Pendidikan kewarganegaraan sebagai wahana untuk membangun karakter toleransi di perguruan tinggi [Citizenship education as a vehicle for building the character of tolerance in higher education]. *WASKITA: Jurnal Pendidikan Nilai Dan Pembangunan Karakter*, 5(2), 171-186. <https://doi.org/10.21776/ub.waskita.2021.005.02.8>
- Widjaja, A. H. (2021). Implementasi Metode Means Ends Analysis (MEA) pada Pembelajaran Fisika tentang Generator untuk Peningkatan Hasil Belajar Pada Siswa Kelas IX-G Semester 2 SMP Negeri 4 Tulungagung Tahun Pelajaran 2019/2020 [Implementation of the Means Ends Analysis (MEA) Method in Physics Learning about Generators to Improve Learning Outcomes in Class IX-G Semester 2 Students of SMP Negeri 4 Tulungagung Academic Year 2019/2020]. *Jurnal Pembelajaran dan Riset Pendidikan (JPRP)*, 1(2), 298-307. <https://doi.org/10.28926/jprp.v1i2.145>
- Winarti, W. T., Yuliani, H., Rohmadi, M., & Septiana, N. (2021). Pembelajaran fisika menggunakan model discovery learning berbasis edutainment [Physics learning uses an edutainment-based

- discovery learning model]. *Jurnal Ilmiah Pendidikan Fisika*, 5(1), 47. <https://doi.org/10.20527/jipf.v5i1.2789>
- Wirayuda, R. P., Wandai, R., & Ginting, A. A. B. (2022). Hubungan sikap siswa terhadap hasil pembelajaran fisika SMA N 1 Kota Sungai Penuh [The relationship between students' attitudes towards physics learning outcomes at SMA N 1 Sungai Penuh City]. *Integrated Science Education Journal*, 3(1), 24-27. <https://doi.org/10.37251/isej.v3i1.172>
- Yosua, R., Fauzan, A., Kistiani, K., & Astuti, I. A. D. (2019). Aplikasi KALFIS (Kalkulator Fisika) berbasis matlab untuk membantu analisis eksperimen fisika [Matlab-based KALFIS (Physics Calculator) application to help analyze physics experiments]. *Navigation Physics: Journal of Physics Education*, 1(2), 59-62. <https://doi.org/10.30998/npjpe.v1i2.201>
- Zulela, M. S., Neolaka, A., Iasha, V., & Setiawan, B. (2022). How is the Education Character Implemented? The Case Study in Indonesian Elementary School. *Journal of Educational and Social Research*, 12(1), 371. <https://doi.org/10.36941/jesr-2022-0029>