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Green Spirituality: The Effect of Spirituality Attitude for Students' Environment Care Character

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ABSTRAK

Spiritualitas hijau sangat penting dilakukan karena dapat menumbuhkan pengembangan karakter yang baik bagi setiap individu. Konsep peduli lingkungan dan sikap spiritual yang sangat erat kaitannya juga berdampak signifikan terhadap karakter peserta didik. Penelitian ini bertujuan untuk mengkaji sikap dan karakter spiritual siswa peduli lingkungan dan dampaknya. Jenis penelitian ini adalah metode campuran (mixed method). Sampel yang digunakan adalah 35 siswa SMA dengan teknik pengambilan sampel yang digunakan adalah simple random sampling. Instrumen yang digunakan adalah instrumen kuantitatif berupa angket sikap spiritual dan karakter peduli lingkungan siswa, sedangkan instrumen kualitatif berupa lembar wawancara sikap spiritual siswa. Teknik analisis yang digunakan adalah uji statistik deskriptif dan uji regresi linier. Hasil yang diperoleh dalam penelitian ini adalah sampel memiliki kategori cukup baik untuk masing-masing variabel, sedangkan untuk uji regresi linier menunjukkan terdapat 50,3% pengaruh sikap spiritual terhadap karakter peduli lingkungan siswa. Hasil ini menunjukkan bahwa terdapat pengaruh yang signifikan antara sikap spiritual terhadap karakter peduli lingkungan siswa.

ABSTRACT

Green spirituality is very important to do because it can foster good character development for each individual. The concept of caring for the environment and spiritual attitudes that are very closely related also have a significant impact on the character of students. This study aims to examine the spiritual attitude and character of students' environmental care and their effects. This type of research is a mixed method. The sample used is 35 high school students with the sampling technique used is simple random sampling. The instrument used is a quantitative instrument in the form of a questionnaire of students' spiritual attitudes and environmental care characters, while the qualitative instrument is an interview sheet for students' spiritual attitudes. The analysis technique used is descriptive statistical test and linear regression test. The results obtained in this study are that the sample has a fairly good category for each variable, while for the linear regression test, it shows that there is 50.3% of the influence of spiritual attitudes on the character of students' environmental care. These results indicate that there is a significant influence between spiritual attitudes on the students' environmental care character.

1. INTRODUCTION

Education is a very complex and complex system supported by policies, methodologies, and conceptualizations (Astalini, Darmaji, Kurniawan, & Chen, 2021a; Jacobson et al., 2019; Muslim et al., 2021). Education in Indonesia plays an important role in developing human resources (Amri et al., 2017; Suwarma & Kumano, 2019). Education does not only mean making someone free from falling, but also realizing ideas and social functions so that someone is educated and also civilized. In Indonesia, there are at least 170,000 primary schools, 40,000 junior high schools, 26,000 senior high schools, and 3,000 higher education institutions (Astalini, Darmaji, Kurniawan, & Wulandari, 2021; Churiyah et al., 2020; Yulianto & Kasahara, 2020). With so many schools from elementary to high, it is necessary to improve the quality of learning, one of which is in a scientific environment that not only requires knowledge but also the spiritual attitude of students. The concept of attitude is a concept related to the development of spiritual potential that is full of values that are considered sacred (Alawiyah & Handayani, 2019; Azarsa et al., 2015). Someone who wants

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to develop spiritually must be based on sincerity, not when trying. In addition, spiritual attitudes are also personal in the sense that two people who do the same spiritual activity will have relatively different results. With these differences and of course the measurement of students' spiritual attitudes in class becomes much more interesting learning because each individual certainly has a different mindset of action between each other (Halim, 2016; A. Hidayati et al., 2015). One of the applications of this spiritual attitude is the interaction between students and their environment.

Environmental destruction in today's era where industrial development is very rapid is a very crucial problem (Arent et al., 2020; Caddafie et al., 2017; Nurwidodo et al., 2020; Sarıkaya & Saraç, 2018). The urgency of environmental damage is most often carried out by human hands, therefore environmental awareness is needed for the younger generation. Knowledge is used for environmental management attitudes and behaviors play an important role in protecting the environment (Aliman et al., 2019; Rosidin, 2017). Environmental care character is one of the 18 national characters which is also an indicator of the success of Indonesian character education (N. A. Hidayati et al., 2020; Syamsuri & Hasriani, 2018). A sustainable approach, especially for the younger generation, is needed to instill awareness of environmental care. Positive environmental care characters play an important role in environmental relationships or interactions with students (Ekamilasari et al., 2021). By combining the spiritual aspect with the environmental care character of students, a concept called Green Spirituality arises. The Green Spirituality concept is interesting to study and is associated with Islamic studies, especially Islamic Philosophy, especially in the context of the spiritual ecology in the philosophy language, namely the teleological argument of the existence of God, which later became the basis for Green Spirituality (Camorrino, 2018; Hasanah et al., 2017). That is, borrowing the language, linking the objects of science with their metaphysical sources, so that science will no longer treat its objects without any connection with the higher reality. His Also further explained that in Islam, this universe is a verse or signs of God. Therefore, when conducting studies on nature, it actually also conducts research on the way God works in this creation, which is more popularly called the Sunnah of Allah. Thus it would be very possible to add confidence, rather than instead trying to get rid of God from the research arena even from studies of this nature.

Research related to green spirituality is very important to do because it can foster good character development for each individual. The concept of caring for the environment and spiritual attitudes that are very closely related also have a significant impact on the character of students (Sari et al., 2021). The character of caring for the environment gives a psychological impact where humans actually cannot live alone but also need help from outside parties, for example the environment (Azarsa et al., 2015; Mardapi, 2018). In addition, by caring for the environment, students have indirectly carried out religious orders which are also closely related to the students' spiritual attitudes. Then, from his spiritual attitude, the spread of radical ideas from outside countries has caused concern for every element of society. Therefore, it is necessary to strengthen the individual's special spiritual identity. With reference to these various reasons, this research needs to be done in an effort to form individual characters so that they are not influenced by negative ideas from outside. The research conducted by the author basically complements previous studies that examined similar variables. Previous research has not investigated the influence of spiritual attitudes on the character of students' environmental care. Previous research mostly focused on one variable, such as the research which examined specifically about spiritual attitudes (Bachtiar et al., 2018; Deluga et al., 2020; Gusviani, 2016). The research examined specifically the character of students' care for the environment (Bachtiar et al., 2018). In addition, because the study only knows the influence between variables, the sample used is not too large, in contrast to the research which used more than one class sample (Bahrudin et al., 2017; Yanti & Yusliani, 2020). Based on the description that has been stated, the purpose of this study is to analyze the level of students' spiritual attitudes, analyze the character of students' environmental care, and analyze how the influence of students' spiritual values on the character of caring for the environment.

2. METHOD

Research was conducted using a mixed method approach with the research variables used were students' spiritual character and environmental care. Where according to experts (Almeida, 2018; McKim, 2017; Täuscher & Laudien, 2018), mixed method is an approach that combines quantitative and qualitative methods into a single study in order to provide a broader and complete picture of a problem. The sample used is class XI MIPA 1 SMA Adhyaksa 1 Jambi with the sampling method used is simple random sampling. Simple random sampling is the simplest and most commonly used method where every member of the population has an equal chance of being selected as a subject and producing optimal data (Etikan & Bala, 2017; Pal et al., 2018). Broadly speaking, the research has two stages, namely, quantitative data collection

and qualitative data collection. The quantitative data used there are several variables, one of which is a spiritual attitude questionnaire, a grid of instruments for students' spiritual attitudes in Table 1.

Table 1. Grid of Spiritual Attitude Instruments

Spiritual Attitude Indicator	Number of Statement
Interaction with God	1, 2, 5, 6, 7
Application in daily life	3, 4, 5, 6, 8, 9, 10

The interest questionnaire itself has a Likert scale of 1 to 4 which is divided; 1 (Never), 2 (Never), 3 (Sometimes), 4 (Often), 5 (Always). Then for the scoring range for the level of interest in learning, in Table 2. Then for the environmental care character variable, there are several indicators that in Table 3.

Table 2. Score Range of Students' Spiritual Character Level

Interval Score	Student Spiritual Attitude Level
42,01 - 50,00	Very good
34,01 - 42,00	Well
26,01 - 34,00	Enough
18,01 - 26,00	Not good
10,00 - 18,00	Very Not Good

Table 3. Grid of the Questionnaire Instruments of Students' Environmental Care Characters

<u>Indicator</u>	Number of statement
Always Maintain Environmental Sustainability	1, 2
Love the tidiness and cleanliness of the environment	3, 4
Wise in the use of natural resources	5, 6
Support Greening	7,8
Participatory Based Activities	9, 10

For the perception questionnaire itself has a Likert scale of 1 to 4 which is divided; 1 (Never), 2 (Never), 3 (Sometimes), 4 (Often), 5 (Always). Then for the score range for the character level who cares about the learning environment, in Table 4. Then the qualitative data was carried out as an initial study by interviewing several students. The grid of interview instruments in Table 5.

 Table 4. Student Environmental Care Character Level Score Range

Interval Score	Environment care character Level
42,01 - 50,00	Very good
34,01 - 42,00	Well
26,01 - 34,00	Enough
18,01 - 26,00	Not good
10,00 - 18,00	Very Not Good

Table 5. Grid of Students' Spiritual Attitude Interview Instruments

Indicator	Number of statement
Interaction with God	2, 4
Application in daily life	1, 3, 5

The data obtained are divided into two, namely quantitative data and qualitative data. Qualitative data, namely the response of educators were analyzed based on Miles and Huberman. While the results of the quantitative data were analyzed using descriptive and inferential statistics. Descriptive statistics are used to interpret data with maximum, minimum, and sample mean comparisons (Amrhein et al., 2019; Sugiyanto & Candra, 2019). Presentation of data for descriptive statistics itself includes; mean, median, maximum, minimum, and standard deviation values. This descriptive statistic was carried out to 3 classes in each school with 4 variables being tested, namely interest, perception, and environmental care character. Then, for inferential statistics, it is a sample data analysis tool that can be used to explain the estimation error in the sample. Inferential statistics are divided into two, namely assumption test and hypothesis testing. The hypothesis test used in this research is simple linear regression test. Meanwhile, to test

assumptions or prerequisites before testing the hypothesis, normality and linearity tests are used (Çetin & Özdemir, 2018; Y. F. Chen et al., 2018; Ong et al., 2020). The first research procedure was to analyze the sample and prepare the instrument. Then data was collected by distributing questionnaires of perceptions and questionnaires of student learning outcomes. After the data was collected, the researcher analyzed the data using descriptive statistics and inferential statistics. The data that has been analyzed is then viewed and conclusions are drawn to answer the formulated research objectives.

3. RESULT AND DISCUSSION

Result

Results The results of the data are divided into two, namely quantitative data and qualitative data. There are two quantitative data used, namely the spiritual attitude questionnaire and the students' environmental care character. As for the results of the descriptive statistical test of the spiritual attitude questionnaire, in Table 6.

Table 6. Descriptive Test Results of Spiritual Attitude

Interval	Category	F	(%)	Mean	Median	Modus	Min	Max
42.1 - 50.0	Very good	2	5.71					
34.1 - 42.0	Well	2	34.29	22.22	22.00	32.00	20.00	42.00
26.1 - 34.0	Enough	0	57.14	33.32	33.00	32.00	20.00	43.00
18.1 - 26.0	Not good	1	2.86					
10.0 - 18.0	Very Not Good	0	0					
	Total	35	100					

From the table above it can be seen that as many as 20 students (57.14%) are in the fairly good category, then 12 students (34.29%) are in the good category, 2 people (5.71%) are in the very good category, and 1 person (2.86%) is in the bad category. The overall data obtained an average value of 33.32% which is in the fairly good category. Then for the results of the descriptive statistical test of the students' caring environment character showed in Table 7.

Table 7. Descriptive Test Results of Students Care for the Environment

Interval	Category	F	(%)	Mean	Median	Modus	Min	Max
42.1 - 50.0	Very good	0	0					
34.1 - 42.0	Well	4	40.00					
26.1 - 34.0	Enough	8	51.42	31.78	33.00	35.00	18.00	41.00
18.1 - 26.0	Not good	3	8.58					
10.0 - 18.0	Very Not Good	0	0					
Total		35	100					

Table 9 provides information about the descriptive results of students' environmental care characters. Based on the table, it can be seen that the percentage of the dominant student's environmental care character is categorized as sufficient or good enough with the number of students stating it as many as 18 people (51.42%) where the average score is 31.78, the minimum score is 18, and the maximum score is 41. Overall, the environmental care character possessed by students can be said to be quite good. After carrying out descriptive statistical tests, the authors then test the hypothesis where before carrying out the test the assumptions are tested first. The results of the assumption test showed in Table 8.

 Table 8. Assumption Test Result

Variable	Assumption Test	Sig	Distributed
Spiritual Attitude		0.053	
Environment care character	Normality Test	0.200	Normal
Spiritual Attitude * Environment care character	Linierity Test	0.167	Linier

After the assumption test is met, the writer then tests the hypothesis which uses a simple linear regression test to determine the effect of the variable. The results of the linear regression test and the coefficient of determination showed in Table 9.

Table 9. Linear Regression Test and Coefficient Determinant Results

Unstandardiz	Unstandardized Coefficients		Т	Sig.	R	R Square
В	Std. Error	Beta				
45.716	6.042		8.110	0.000	0.709	0.503
0.026	0.057	0.021	0.212	0.024	0.709	0.503

From the table above, it can be seen that the significance value of the linear regression test is 0.024 where this value indicates that there is an influence between spiritual attitudes (X) on the students' environmental care character (Y). The value of R square itself shows how big the influence is, where from the table it shows that there is 50.3% of the influence of spiritual attitudes on the character of caring for the environment of students, while the rest is the influence of other variables. Then to strengthen quantitative data, the authors also took qualitative data in the form of interviews. From the results of the interviews, it was found that some students only prayed at the start of the lesson while in other activities they sometimes forgot. Then for the question about gratitude, students answered that they were always grateful for what they got along with the worship they often did. As for daily habits such as greeting, they sometimes forget to do it.

Discussion

Spiritual attitude shows that students always carry out all activities based on religious teachings where if the students' spiritual attitude is good it will make the learning they do meaningful and have a good impact on others (Astalini, Darmaji, Kurniawan, & Chen, 2021b; Darmaji et al., 2021). From the results of descriptive statistical tests, it can be seen that the average student has a fairly good spiritual attitude, this is indicated by the results of the average student spiritual attitude questionnaire which obtained a score of 33.32 which is in the fairly good category. The better the spiritual attitude of the students, the better the behavior of the students in acting. a good spiritual attitude can make a good individual as well, this indicates that this spiritual attitude makes individuals more aware of God and His creation, with reference to this, of course, students can develop their caring attitude (Azarsa et al., 2015; Mardapi, 2018; Vandenhoeck et al., 2021). both towards fellow humans and the environment in which they develop (Gusviani, 2016; Rini et al., 2020).

Environmental care character education basically helps teachers in inculcating students' character about their concern for the environment (Rokhmah, 2019; Yanti & Yusliani, 2020). Environmental care character education can be a measure of students' concern and sensitivity to an environment that is a healthy and comfortable place to learn (Afiat et al., 2016; Dwi Purwanti, 2017). A healthy and comfortable environment can improve student achievement and creativity in learning (Lepiyanto & Pratiwi, 2015; D. Purwanti, 2017). The results of table 7 show that the average student has a fairly good environmental care character, this is evidenced by the average value of the statistical test which gets a score of 31.78. With these results, it certainly makes it easier for teachers to create a comfortable learning atmosphere, especially in science learning which is closely related to the natural surroundings.

Based on the results of the assumption test in table 7, it shows that the data collected is normally and linearly distributed with a significance value of more than 0.05. After the assumption test is met, the authors test the hypothesis, namely a simple linear regression test and a coefficient of determination, the results obtained indicate that there is an influence of spiritual attitudes on the character of students' environmental care (D. Chen et al., 2021). The effect itself is 50.3% which is obtained from the value of R square, for the remaining 49.7% is the influence of other variables. The results of this descriptive statistical test itself are accompanied by interviews which show that students tend to have some obstacles in their spiritual attitudes at school, this of course makes the teacher's role very important in dealing with these obstacles.

The implications of this research are divided into 3, namely; for teachers, for students, and for schools. For teachers, this research provides an overview of how students' spiritual attitudes towards the character of environmental care. Teachers in this case can complement which aspects are less or rarely implemented in the classroom, by improving this, of course, making the learning atmosphere more comfortable and interesting (Hayah, 2017; Iswatun et al., 2017; Setyosari, 2017). Then for students, this research helps students to improve their learning outcomes where spiritual attitudes and environmental care are aspects of attitudes that are assessed by most teachers. By improving learning outcomes, of course,

students' scores will be better and students' knowledge and skills will indirectly increase (Afriyeni, 2018; Kamid et al., 2021). Then for yourself, with research providing an overview to the school of how the output of student attitudes when studying, this certainly helps schools to see how successful the programs that have been implemented previously are, furthermore this will also have an effect on accreditation or school assessments both from the ministry and the community itself.

This research has several advantages and disadvantages. The advantage of this research is that it can specifically describe the spiritual attitudes and environmental care character of students in a particular population. In addition, this research also uses not only quantitative data, but also qualitative data as a support for quantitative data. This study also has several weaknesses that are expected to be improved by future research. The sample of this research is only limited to one class which is intended to see the effect of one variable on another. Then in terms of variables, it is only limited to descriptive statistical tests on each variable and also a simple linear regression test, in contrast to the research, uses a correlation test and focuses on students' emotions (Hiebler-Ragger et al., 2018). Then in terms of the variety of auxiliary media, this study did not use teaching aids such as e-modules or books, in contrast to the research, integrated the use of e-modules in measuring student character (Sitorus et al., 2019). Based on this, it is hoped that further research can add more samples and also add teaching aids and test the hypothesis. The spiritual attitudes have an influence on the students' environmental care character. The influence is certainly good in order to support the development of students' character so that they are not affected by negative influences from outsiders.

4. CONCLUSION

There is an influence of spiritual attitudes on the students' environmental care character. This is certainly not surprising because spiritual attitudes refer to God and his creation which in this context refers to the environment. Therefore, someone who has a good spiritual attitude also has a high environmental concern as well.

5. REFERENCES

- Afiat, D., Mardikaningtyas, Ibrohim, I., & Suarsini, E. (2016). Pengembangan Pembelajaran Pencemaran Lingkungan Berbasis Penelitian Fitoremediasi Untuk Menunjang Keterampilan Ilmiah, Sikap Peduli Lingkungan Dan Motivasi Mahasiswa Pada Matakuliah Dasar-Dasar Ilmu Lingkungan. *Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan, 1*(3). https://doi.org/10.17977/jp.v1i3.6179.
- Afriyeni, Y. (2018). Pembentukan karakter anak untuk peduli lingkungan yang ada di sekolah adiwiyata mandiri SDN 6 Pekanbaru. *PAUD Lectura: Jurnal Pendidikan Anak Usia Dini*, 1(2). https://doi.org/10.31849/paudlectura.v1i2.1171.
- Alawiyah, D., & Handayani, I. (2019). Penanaman Nilai Spiritual dalam Dimensi Psikoterapi Islam di PP. Rehabilitasi Salafiyah Syafi'iyah Nashrun Minallah. *KONSELI: Jurnal Bimbingan dan Konseling (E-Journal)*, 6(1). https://doi.org/10.24042/kons.v6i1.4073.
- Aliman, M., Budijanto, Sumarmi, & Astina, I. K. (2019). Improving environmental awareness of high school students' in Malang city through earthcomm learning in the geography class. *International Journal of Instruction*, 12(4). https://doi.org/10.29333/iji.2019.1246a.
- Almeida, F. (2018). Strategies to Perform a Mixed Methods Study. *European Journal of Education Studies*, 5(1). https://doi.org/10.5281/zenodo.1406214.
- Amrhein, V., Trafimow, D., & Greenland, S. (2019). Inferential Statistics as Descriptive Statistics: There Is No Replication Crisis if We Don't Expect Replication. *American Statistician*, 73(2). https://doi.org/10.1080/00031305.2018.1543137.
- Amri, A., Bird, D. K., Ronan, K., Haynes, K., & Towers, B. (2017). Disaster risk reduction education in Indonesia: Challenges and recommendations for scaling up. *Natural Hazards and Earth System Sciences*, 17(4).
- Arent, E., Sumarmi, S., Utomo, D. H., & Ruja, I. (2020). Improving Students' Environmental Care Character Through Positive Character Camp (Pcc) Program. *Journal for the Education of Gifted Young Scientists*, 8(4). https://doi.org/10.17478/jegys.771681.
- Astalini, A., Darmaji, D., Kurniawan, D. A., & Chen, D. (2021a). Investigating Student Perceptions Based on Gender Differences Using E-Module Mathematics Physics in Multiple Integral Material. *Jurnal Pendidikan Sains Indonesia*, 9(4). https://doi.org/10.24815/jpsi.v9i4.21297.
- Astalini, A., Darmaji, D., Kurniawan, D. A., & Chen, D. (2021b). Students' Perceptions of Mathematical Physics E-Module on Multiple Integral Material. *Journal of Education Technology*, 5(4). https://doi.org/10.23887/jet.v5i4.33600.

- Astalini, A., Darmaji, D., Kurniawan, D. A., & Wulandari, M. (2021). Male or Female, who is better? Students' Perceptions of Mathematics Physics E-Module Based on Gender. *Indonesian Journal on Learning and Advanced Education (IJOLAE)*, 3(3). https://doi.org/10.23917/ijolae.v3i3.14830.
- Azarsa, T., Davoodi, A., Markani, A. K., Gahramanian, A., & Vargaeei, A. (2015). Spiritual wellbeing, attitude toward spiritual care and its relationship with spiritual care competence among critical care nurses. *Journal of caring sciences*, 4(4). https://doi.org/10.15171/jcs.2015.031.
- Bachtiar, S., Zubaidah, S., Corebima, A. D., & Indriwati, S. E. (2018). The spiritual and social attitudes of students towards integrated problem based learning models. *Issues in Educational Research*, *28*(2). https://doi.org/10.3316/ielapa.673071578795421.
- Bahrudin, M. D. F., Hidayah, H., & Prihadi, F. Y. (2017). The contribution of implementation adiwiyata program on environment caring character at senior high school adiwiyata in pandeglang Banten. *Sumatra Journal of Disaster, Geography and Geography Education*, 1(2). https://doi.org/10.24036/sjdgge.v1i2.105.
- Caddafie, S. U., Kariada, N., Martuti, T., Rudyatmi, E., & Article, I. (2017). The Impact of Adiwiyata Program on Environmental Caring Character. *Journal of Biology Education*, 6(3). https://doi.org/10.15294/jbe.v6i3.21090.
- Camorrino, A. (2018). Green Spirituality and Physical Culture. Extreme Sports and the Imagery of Wilderness. *Societies*, 8(4). https://doi.org/10.3390/soc8040096.
- Çetin, A., & Özdemir, Ö. F. (2018). Mode-method interaction: The role of teaching methods on the effect of instructional modes on achievements, science process skills, and attitudes towards physics. *Eurasia Journal of Mathematics, Science and Technology Education,* 14(5). https://doi.org/10.29333/EJMSTE/85217.
- Chen, D., Fitriani, R., Maryani, S., Rini, E. F. S., Putri, W. A., & Ramadhanti, A. (2021). Deskripsi Keterampilan Proses Sains Dasar Siswa Kelas VIII Pada Materi Cermin Cekung. *PENDIPA Journal of Science Education*, *5*(1). https://doi.org/10.33369/pendipa.5.1.50-55.
- Chen, Y. F., Luo, Y. Z., Fang, X., & Shieh, C. J. (2018). Effects of the application of computer multimedia teaching to automobile vocational education on students' learning satisfaction and learning outcome. *Eurasia Journal of Mathematics, Science and Technology Education,* 14(7). https://doi.org/10.29333/ejmste/91245.
- Churiyah, M., Sholikhan, S., Filianti, F., & Sakdiyyah, D. A. (2020). Indonesia education readiness conducting distance learning in covid-19 pandemic situation. . . *International Journal of Multicultural and Multireligious Understanding*, 7(6). https://doi.org/10.18415/ijmmu.v7i6.1833.
- Darmaji, D., Astalini, A., Kurniawan, D. A., & Putri, W. A. (2021). Rural Student Analysis: Correlation Science Process Skills and Critical Thinking at a State Senior High School in Jambi Province. *Ta'dib*, *24*(2). https://doi.org/10.31958/jt.v24i2.3645.
- Deluga, A., Dobrowolska, B., Jurek, K., Ślusarska, B., Nowicki, G., & Palese, A. (2020). Nurses' spiritual attitudes and involvement—Validation of the Polish version of the Spiritual Attitude and Involvement List. *Plos one*, *15*(9). https://doi.org/10.1371/journal.pone.0239068.
- Ekamilasari, Permanasari, A., & Pursitasari, I. D. (2021). Students' Critical Thinking Skills and Sustainability Awareness in Science Learning for Implementation Education for Sustainable Development. *Indonesian Journal of Multidiciplinary Research Journal*, 1(1). https://doi.org/10.17509/xxxxt.vxix.
- Etikan, I., & Bala, K. (2017). Sampling and sampling methods. *Biometrics & Biostatistics International Journal Sampling*, 5(6). https://doi.org/10.15406/bbij.2017.05.00149.
- Gusviani, E. (2016). Analisis kemunculan sikap spiritual dan sikap sosial dalam kegiatan pembelajaran IPA kelas IV SD yang menggunakan KTSP dan kurikulum 2013. *EduHumaniora: Jurnal Pendidikan Dasar Kampus Cibiru*, 8(1). https://doi.org/10.17509/eh.v8i1.5127.
- Halim, A. (2016). Pengembangan Lks Berbasis Problem Based Learning Bermuatan Sikap Spiritual pada Materi Pengukuran untuk Meningkatkan Kemampuan Berpikir Kritis Siswa. *Jurnal Ilmiah Mahasiswa Pendidikan Fisika*, 1(4).
- Hasanah, Nurjaya, & Astika. (2017). Pengintegrasian Sikap Spiritual dan Sikap Sosial dalam Pembelajaran Teks Ulasan Film/Drama di Kelas XI MIPA SMA Negeri 3 Singaraja. *Jurnal Pendidikan Bahasa dan Sastra Indonesia Undiksha*, 7(2). https://doi.org/10.23887/jjpbs.v7i2.11579.
- Hayah, R. K. (2017). Character Education in Islamic Boarding School and the Implication to Students' Attitude and Critical Thinking Skills on Biodiversity Learning. *In Journal of Physics: Conference Series*, 812(1). https://doi.org/10.1088/1742-6596/812/1/012101.
- Hidayati, A., Rosidin, U., & Suyanto, E. (2015). Pengembangan Lks Problem Based Learning Bermuatan Sikap Spiritual Sosial Dengan Penilaian Autentik. *Jurnal Pembelajaran Fisika*, 3(2).
- Hidayati, N. A., Waluyo, H. J., Winarni, R., & Suyitno. (2020). Exploring the implementation of local wisdom-

- based character education among indonesian higher education students. *International Journal of Instruction*, *13*(2). https://doi.org/10.29333/iji.2020.13213a.
- Hiebler-Ragger, M., Fuchshuber, J., Dröscher, H., Vajda, C., Ink, A., & Unterrainer, H. F. (2018). Personality influences the relationship between primary emotions and religious/spiritual well-being. *Frontiers in psychology*, 9(2). https://doi.org/10.3389/fpsyg.2018.00370.
- Iswatun, I., Mosik, M., & Subali, B. (2017). Penerapan model pembelajaran inkuiri terbimbing untuk meningkatkan KPS dan hasil belajar siswa SMP kelas VIII. *Jurnal Inovasi Pendidikan IPA*, *3*(2), 150–160. https://doi.org/10.21831/jipi.v3i2.14871.
- Jacobson, M. J., Levin, J. A., & Kapur, M. (2019). Education as a Complex System: Conceptual and Methodological Implications. *Educational Researcher*, 48(2). https://doi.org/10.3102/0013189X19826958.
- Kamid, K., Rohati, R., Rahmalisa, Y., Anggo, M., Septi, S. E., Azzahra, M. Z., & Nawahdani, A. M. (2021). Engklek Game in mathematics: How difference and relationship student attitude towards science process skills? *Cypriot Journal of Educational Sciences*, *16*(6). https://doi.org/10.18844/cjes.v16i6.6500.
- Lepiyanto, A., & Pratiwi, D. (2015). Pengembangan Bahan Ajar Berbasis Inkuiri Terintegrasi Nilai Karakter Peduli Lingkungan Pada Materi Ekosistem. *BIOEDUKASI (Jurnal Pendidikan Biologi)*, 6(2), 143–147. https://doi.org/10.24127/bioedukasi.v6i2.344.
- Mardapi, D. (2018). Developing an instrument for measuring the spiritual attitude of high school students. *REiD (Research and Evaluation in Education)*, *4*(1). https://doi.org/10.21831/reid.v4i1.20304.
- McKim, C. A. (2017). The Value of Mixed Methods Research: A Mixed Methods Study. *Journal of Mixed Methods Research*, 11(2). https://doi.org/10.1177/1558689815607096.
- Muslim, F., Refnida, R., Chen, D., & Wirayuda, R. P. (2021). Macroeconomic Digital Book Development: How are the Feasibility of Experts and Student Responses? *Journal of Education Technology*, *5*(3). https://doi.org/10.23887/jet.v5i3.38280.
- Nurwidodo, N., Amin, M., Ibrohim, I., & Sueb, S. (2020). The role of eco-school program (Adiwiyata) towards environmental literacy of high school students. *European Journal of Educational Research*, 9(3). https://doi.org/10.12973/EU-JER.9.3.1089.
- Ong, K. J., Chou, Y. C., Yang, D. Y., & Lin, C. C. (2020). Creative drama in science education: The effects on situational interest, career interest, and science-related attitudes of science majors and non-science majors. *Eurasia Journal of Mathematics, Science and Technology Education,* 16(4). https://doi.org/10.29333/ejmste/115296.
- Pal, S. K., Singh, H. P., Kumar, S., & Chatterjee, K. (2018). A family of efficient estimators of the finite population mean in simple random sampling. *Journal of Statistical Computation and Simulation*, 88(5). https://doi.org/10.1080/00949655.2017.1408808.
- Purwanti, D. (2017). Pendidikan karakter peduli lingkungan dan implementasinya. *DWIJA CENDEKIA: Jurnal Riset Pedagogik*, 1(2). https://doi.org/10.20961/jdc.v1i2.17622.
- Purwanti, Dwi. (2017). Pendidikan Karakter Peduli Lingkungan Dan Implementasinya. *DWIJA CENDEKIA: Jurnal Riset Pedagogik*, 1(2), 14–20. https://doi.org/10.20961/jdc.v1i2.17622.
- Rini, E. F. S., Wibisono, G., Ramadhanti, A., Simamora, N. N., & Chen, D. (2020). Pengaruh Kemandirian Terhadap Prestasi Belajar Siswa Kelas XI di SMA Negeri 11 Kota Jambi. *Jurnal Pendidikan Fisika Dan Teknologi*, 6(2). https://doi.org/10.29303/jpft.v6i2.2211.
- Rokhmah, U. N. (2019). Pelaksanaan Program Adiwiyata Sebagai Upaya Pembentukan Karakter Peduli Lingkungan Siswa Di Madrasah Ibtidaiyah. *Al Qalam: Jurnal Ilmiah Keagamaan dan Kemasyarakatan*, 3(2). https://doi.org/10.35931/aq.v0i0.133.
- Rosidin, A. U. (2017). Teachers and Students Knowledge about Global Warming: a Study in Smoke Disaster Area of Indonesia. *International Journal of Environmental and Science Education*, 12(4).
- Sari, N. P., Makaria, E. C., Rochgiyanti, R., & Setiawan, M. A. (2021). Environment Care Character Education as a Flood Disaster Management Effort. *AL-ISHLAH: Jurnal Pendidikan*, 13(2). https://doi.org/10.35445/alishlah.v13i2.923.
- Sarıkaya, R., & Saraç, E. (2018). An analysis of pre-service teachers' attitudes towards environmental issues in terms of various variables. *Universal Journal of Educational Research*, 6(1). https://doi.org/10.13189/ujer.2018.060109.
- Setyosari, P. (2017). Menciptakan Pembelajaran Yang Efektif Dan Berkualitas. *JINOTEP (Jurnal Inovasi dan Teknologi Pembelajaran) Kajian dan Riset dalam Teknologi Pembelajaran*, 1(5), 20–30. https://doi.org/10.17977/um031v1i12014p020.
- Sitorus, D. S., Suwandari, & Kristiani. (2019). The Effectiveness of Accounting E-Module Integrated with Character Value to Improve Students Learning Outcomes and Honesty. *Cakrawala Pendidikan*, 38(1120–129). https://doi.org/10.21831/cp.v38i1.20878.
- Sugiyanto, S., & Candra, A. (2019). Good Corporate Governance, Conservatism Accounting, Real Earnings

- Management, and Information Asymmetry on Share Return. *JIAFE (Jurnal Ilmiah Akuntansi Fakultas Ekonomi)*, *4*(1). https://doi.org/10.34204/jiafe.v4i1.1073.
- Suwarma, I. R., & Kumano, Y. (2019). Implementation of STEM education in Indonesia: Teachers' perception of STEM integration into curriculum. *Journal of Physics: Conference Series*, 5. https://doi.org/10.1088/1742-6596/1280/5/052052.
- Syamsuri, A. S., & Hasriani, R. (2018). Representation of Character Education Values in Nonfiction Stories of National Heroes Biography (A Study of Children's Literature). *IOSR Journal Of Humanities And Social Science (IOSR-JHSS)*, 23(7). https://doi.org/10.9790/0837-2307050611.
- Täuscher, K., & Laudien, S. M. (2018). Understanding platform business models: A mixed methods study of marketplaces. *European Management Journal*, *36*(3). https://doi.org/10.1016/j.emj.2017.06.005.
- Vandenhoeck, A., Holmes, C., Desjardins, C. M., & Verhoef, J. (2021). "The Most Effective Experience was a Flexible and Creative Attitude"-Reflections on Those Aspects of Spiritual Care that were Lost, Gained, or Deemed Ineffective during the Pandemic. *The journal of pastoral care & counseling: JPCC, 75*(1), 17–23. https://doi.org/10.1177/1542305020987991.
- Yanti, Y., & Yusliani, E. (2020). Meta-Analisis: Pengaruh Integrasi Pendidikan Lingkungan dalam Pembelajaran IPA Terhadap Sikap Peduli Lingkungan Siswa. *Jurnal Penelitian Dan Pembelajaran Fisika*, *6*(1), 9–16. https://doi.org/10.24036/jppf.v6i1.108590.
- Yulianto, A. A., & Kasahara, Y. (2020). Data warehouse system for multidimensional analysis of tuition fee level in higher education institutions in Indonesia. *International Journal of Advanced Computer Science and Applications*, 11(6). https://doi.org/10.14569/IJACSA.2020.0110666.