META ANALYSIS: THE EFFECT OF IMPLEMENTING TEACHING MATERIALS INTEGRATED WITH ISLAMIC VALUES IN SCIENCE TO DEVELOP STUDENTS' CHARACTER

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ABSTRAK

This research is a type of meta-analysis research that aims to determine how much influence the implementation of teaching materials integrated with Islamic values in the field of science to develop character in learning. The research method carried out is a meta-analysis consisting of the stages of problem formulation, data collection (research), data coding, data analysis and interpretation. The population and samples used as research material are scientific articles that have been published nationally, in 2013-2022. Based on the research conducted, the effect size value of 1.04 was obtained and the interpretation of the effect size value of the effect of the implementation of teaching materials integrated with Islamic values in the field of science with the dependent variable, namely character development, was 84%, so that the research conducted was classified in the high category. This means that teaching materials integrated with Islamic values in the field of science have a high influence on increasing the effectiveness of student character development in learning, especially at all levels of education.

Keywords: Meta Analysis, Teaching Materials, Islamic Values, Science, Character, Learners

Introduction

Education is a systematic and structured medium to improve intelligence and dexterity in the personality of learners in order to improve better living standards (Billah, 2016); (Rahma & Agustin, 2021). In addition, education is the basic key in improving human resources (HR) (Agung et al., 2022) and to realize the formation of character and noble morals for the nation's generation (Hakim & Rahayu, 2019); (Sauri, 2010).

Training to raise children independently is an exposure to learning in Islam and the Prophet teaches to always supervise the possibility of child development, he forms a sense of strength and independence in children to be able to face various elements of society and balanced with their behavior, because basically every individual is required to be responsible for what is done in the world (Utami et al., 2019).

The word of Allah SWT is contained in the Qur'an:

وَلَا نُكَلِّفُ نَفْسًا اِلَّا وُسْعَهَاۗ وَلَدَيْنَا كِتٰبٌ يَّنْطِقُ بِالْحَقِّ وَهُمْ لَا يُظْلَمُوْنَ

Meaning, "We do not burden anyone except according to his ability, and We have with Us a book that speaks the truth, and they have been wronged." (Q.S. Al-Mukminun: 62)

Character is the initial key for students in the world of education, to build and implement the attitudes contained in the direction of national education which includes religious attitudes, tolerance, discipline, honesty, hard work, creativity, independence and democracy, curiosity, national spirit, love for the country, respect for achievement, friendliness or communication, love peace, love to read books, have a sense of environmental protection, social spirit and responsibility (Mukti, 2018). Therefore, education must be optimized to develop the character of students integrated in the learning process at school (Muslimah dkk., 2018).

The integration of Islamic values in education does not have to remain in the metaphysical-philosophical setting, but must have become a body of knowledge that can

convey a complete series of Islamic values in a teaching material (Mukhibat, 2012). In the learning and teaching process, various parties participate in it, one of which is needed, namely teaching materials (Utami et al., 2019). Materials or topics that are well prepared and prepared by the teacher to be used in the learning process with the aim that the learning process can run smoothly is the meaning of teaching materials (Octaviani, 2017). In personalized learning, to record and monitor the data collection process, students can use teaching materials (Istanti, 2015).

The education system in the 4.0 era cannot be separated from the integration of science and religion in the learning process, because with a solid foundation of understanding religious values, individuals can be eliminated from the negative influence of the times (Aulianingsih et al., 2021);(Hakim & Rahayu, 2019). Science is often called IPA (natural science), which is the discipline of physics and life sciences (Sarnawi, 2012). This scientific group includes: physics, chemistry, astronomy, geology, meteorology, mineralogy and the biological life sciences group (Wisudawati, t.t, 2014).

Studying science is not separate from religion, in fact science is inseparable from the religion of Islam and must be considered the fact that the Quran is a guide to absolute truth and is used as a tool to test further truth (Muspiroh, 2013). Integrating religious values into scientific lessons, so that they become part of and no longer conflict because of differences in theory, he understands that this universe occurs because someone has determined it, namely Allah SWT (Makmun, 2014).

The decline of students' character values is the most important problem in education in Indonesia today (Kurdi, 2018). In line with research conducted by Fenti Nurjanah, the deterioration of students' religious character in society can be seen from acts of violence between students, the number of brawls between students, bullying friends after school and many more realities that are negatively related to the character of the nation's children today (Nurjanah et al., 2018). In addition, the reality shows that science learning outcomes and student personality are far from the government's expectations, because based on the results of the 2018 PISA survey, out of 78 countries Indonesia ranks 70th in terms of student science scores (OECD, 2019).

Another similar study conducted by Silviana Nur Faizah explained that by thinking about the formation of the universe as a medium to increase faith and devotion to Allah SWT, one of the sciences related to this is science. Typically, the status of science must be regulated by religion so that science is not misused and is useful in the world. Therefore, religion and science in principle cannot stand alone, so there is a need for the concept of integration of Islam and science (Faizah, 2022).

In addition, in the reality of education in schools, there are still not a few educators who apply traditional teaching materials so it is not possible to balance the understanding of moral and ethical values with the provision of these materials so that this is often neglected. Instilling moral and religious values to students with the aim that students do not stray from the religious guidance that has been adopted before must be done at school (Utami et al., 2019).

The number of problems regarding the decline of Islamic character values and some research data on the application of science and Islamic integrated teaching materials in learning to develop character, so a study is needed to combine several previous studies. This can be done by combining the results of each study so that the final result is obtained which is the conclusion of previous studies. Thus, a systematic method is needed to arrive at this conclusion. The research method used in this research is the meta-analysis method. The researcher aims to conduct research by raising the title "Meta Analysis: The Effect of Implementing Teaching Materials Integrated with Islamic Values in Science to Develop the Character of Learners" after looking for references to previous research.

Methods

The steps in this research method are: problem formulation, data collection (research), data coding, data analysis and interpretation (Cooper et al., 2019). The following are the steps involved in creating a meta-analysis method:

Literature Exploration Procedure

The approach studies analyzed in the review used different approaches. The electronic database used for the search used the keywords "Islamic character education in science subjects, Science-islam integrated science teaching materials, Implementation of Islamic character values in science". The first search was conducted using an electronic database, namely publish or perish 8 in the form of national and international articles or journals with the literature database coming from all levels of equivalent schools in Indonesia.

Inclusion Criteria

Inclusion criteria will be created through a synthesis of exploratory research on the effect of implementing Islamic character values integrated teaching materials in learning in science, using all levels of schools in Indonesia. Studies included in this analysis are R&D, experimental and semi-empirical studies that compare learning using Islamic character values integrated teaching materials in learning in science and students taught conventionally without Islamic character values integrated teaching materials in science. The studies collected were limited to those conducted in Indonesia. Studies without comparison groups and not reporting effect sizes and statistics were not used in the conversion analysis. The statistical data needed for conversion are the mean, standard deviation, or various parametric statistics, namely the t-test results.

Data Coding

The code page readily decodes the data into encrypted form. From this table, for each study the variability and impact data are marked, taking into account the physical variation of the subjects and the duration of the study (spanning less or more than four weeks). Year of publication (2013-2022), sample size of the study (up to 31 people), source of publication (article/journal).

Metrics for Expressing Effect Size

The standardized difference less effect size is a measure used to evaluate and illustrate the clustering effect (d-index) (Cohen, 2013). In analyzing two samples, the effect size is calculated by subtracting the control class mean from the experimental class mean and dividing by the difference. For a sample, it is calculated by subtracting the mean before the test from the mean after the test and dividing by the mean difference of the two standard

No	Given statistical data	Formula
1	Mean and standard deviation in one group	$ES = \frac{\bar{X}_{post-\bar{X}pre}}{SD_{pre}}$
2	Mean and standard deviation in each group (two groups only conducted posttest)	$ES = \frac{\bar{X}_{Eksperimen-}\bar{X}_{kontrol}}{SDkontrol}$
3	Mean and standard deviation in each group (two groups conducted pre-posttest)	$ES = \frac{\left(\bar{X}_{Post-\bar{X}Pre}\right)_{eksperimen}-\left(\bar{X}_{Post-}\bar{X}_{Pre}\right)Kontrol}{\left(\frac{SD\ pre\ kontrol\ +SD\ Pre\ eksperimen+SD\ post\ kontrol}{3}\right)}$
4	Chi-square	$ES = \frac{2r}{\sqrt{1-r^2}}$; $r = \sqrt{\frac{X^2}{n}}$
5	t-count	$ES = t\sqrt{\frac{1}{n_{eksperimen}} + \frac{1}{n_{kontrol}}}$

deviations. The following formulas can be used in Table 1, namely:

Table 1. Effect Size Formulas used

The results are described into high, medium and small categories, After obtaining the effect size value, the criteria are listed in Table 2.

Table 2. Value Categories on Effect Size

Effect Size (ES)	*Cohen's standard category*
0 ≤ ES ≤ 0,2	Small
0 ≤ ES ≤ 0,8	Medium
2ES ≥ 0,8	Large

After the ES score is obtained, it is then interpreted to determine the magnitude in the condition of the influence of the independent variable on the dependent variable shown in Table 3.

Table 3. Interpretation of ES effect on independent variables

ES	**Influence (%)**
0,0	50
0,1	54
0,2	58
0,3	62
0,4	66
0,5	69
0,5	73
0,7	76
0,8	79
0,9	82
1,0	84
1,2	88
1,4	92
1,6	95
1,8	96
2,0	98
2,5	99
3,0	99,9

Methods used should be supported by references, significant revisions, data techniques and procedures, research flow, and highlighted in the literature review article (Nisa dkk., 2021).

Results and Discussion

In this study, there were 35 (n=35) searchable reviews. Relevant articles, namely 5 articles (n=5) were screened for eligibility according to the inclusion and exclusion criteria. 5 articles at all levels of education on student character development using Science-Islam teaching materials. The following data abstraction processing is shown in Figure 1.

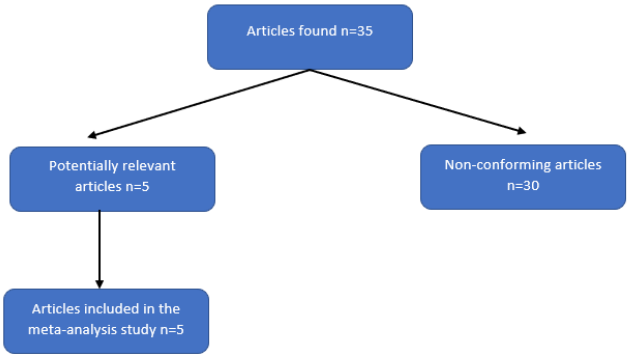

Figure 1. Flow Chart for selection of included studies

The resulting details can be seen in Table 4. The results of the effect size calculation carried out to determine the effect of the implementation of teaching materials integrated with Islamic values in the field of science to develop the character of students are shown in Table 4 (Coe, 2021).

Table 4. Effect of Integrated Teaching Materials to Develop Character

No	Title Article	Author	Variable Bound	Design Research	X Eks	X Kontrol	SD Kontrol	ES	Category
1	The Effect of Using Science Learning Modules Integrated with Religious Values on Increasing Students' Curiosity Character (Hildayatni et al., 2019)	Dita Hildayatni, Retno Triwoelandari, Hilman Hakiem (2015)	Student Curiosity Character	Eksperimen *(pretest-posttest control group desain)*	9,58182	5,40741	2,93012	1,4	High
2	The Effect of Religious Value-Integrated Science Learning Modules on Students' Independent Character Development (Utami et al., 2019)	Intan Rahma Utami, Retno Triwoelandari, M. Kholil Nawawi (2019)	Student Independent Character Development	Eksperimen *(pretest-posttest control group desain)*	6,92188	3,30882	1,92592	1,9	High
3	Powtoon Learning Media Integrated with Religious Values in Science Learning to Develop Characters (Ayu et al., 2019)	Dwi Gusti Ayu, Retno Triwoelandari, Muhammad Fahri (2019)	Developing Character	*quasi eksperiment (before-after control group)*	13,23077	8,61538	3,28165	1,4	High
4	The Effect of Science Learning Media Integrated with Islamic	Faizatul Muslimah, Retno Triwoela	Developing the Religious Characte	*kuantitatif quasi eksperimen*	t_{hitung} = 5,288 n_E = 27 n_K = 27			0,3	Medium

	Values in Developing Religious Character of Grade 5 Elementary School Students (Muslimah et al., 2018)	ndari (2018)	r of Grade 5 Primary School Students				
5	Making ICT-based Physics Modules to Integrate Character Education Values in Learning Students of SMAN 10 Padang Class X Semester 1 (Yopy, 2013)	Yopy Mardiansyah, Asrizal, dan Yulkifli (2013)	Integrating Character Education Values in Student Learning SMAN 10 Padang Class X Semester 1	*Research and Development* (R & D)	t_{hitung} = 3,60 n_E = 31 n_K = 31	0,2	Low
			Average			1,04	High

From Table 4, it can be seen that the value of the effect size price results gives a total ES of 1.04. This means that the effect of implementing teaching materials integrated with Islamic values in the field of science to develop the character of students is 84%. The resulting effect size value is included in the high category. (Cohen, 2013). Figure 2 shows a representation of the effect of the implementation of teaching materials integrated with Islamic values in science to develop the character of students at all levels of education.

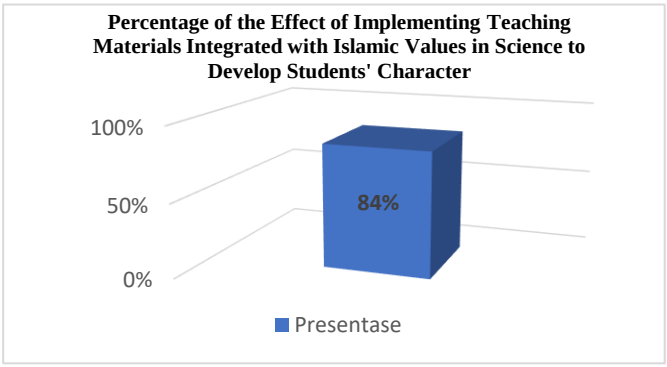

Figure 2. Percentage diagram

Figure 2. shows that the percentage of the effect of the implementation of teaching materials integrated with Islamic values in the field of science to develop character in learning based on the calculation of the effect size value of 84%, this means that the implementation of teaching materials integrated with Islamic values in the field of science has a high influence on developing the character of students.

Teachers must make breakthroughs and take steps to overcome the shortcomings they face to improve the quality of learning and optimize the effectiveness of the learning process with the development of science-based character learning tools (JAYA et al., 2014). This agrees with the opinion of Gunawan et al, who explain that character education from an early age must be given to a child, so that he can become an educated human being, respected in social life for good behavior, and has personality, creativity and intelligence, in addition, applying the noble values of the nation and religion is also expected to be able to do a child (Gunawan et al., 2018).

The need to include religious learning science studies (verses kauniyyah) can be based

on several bases: (1) It is necessary to avoid mental gaps in science education in schools and in the scientific world and find solutions; (2) Natural phenomena that exist and occur on earth and in the sky become scientific research materials and objects of contemplation of Allah SWT; (3) Science "denies" God can cause humans to "struggle" with science to face many multidimensional crises; (4) The presentation of scientific textbooks (theories and explanations) is based on materialism, which excludes God as the Creator; (5) The verses of the Qur'an (Kauniyiah) outlined in outline will be better understood if supported by scientific understanding; and (6) So that students do not fall into teachings that are contrary to their religious beliefs and beliefs, efforts are needed to "frame" science. In general, a deeper understanding of God's verses, both qauliyah and kauniyah verses, is the goal of Islamic science (Irwandani, 2016).

Therefore, integrating teaching materials with religious values is very important for the development of students' personalities. The concept of science with Islamic values is through the Islamization of science, integrating Western science with Islamic science. To develop this, learning support is needed in the form of teaching materials (Handrianto, 2021). oth written and unsystematic, to create a learning environment/atmosphere conducive to organized learning (Mudlofir, 2011). The principles of creating teaching materials are relevance, consistency, and suitability. The principle of breadth and depth of material and the principle of sufficiency in determining the scope of learning material must be considered (Susilowati, 2017).

According to research conducted by Jaya et al, it was found that the teaching materials developed were effective in improving character because an increase in character values using the guided inquiry approach in biology subjects was obtained, starting from an increase in the character of honesty as evidenced by being trained to carry out experimental activities that report data in accordance with the results of observations, an increase in the character of responsibility as evidenced by students being able to apply their duties and obligations and not being easily influenced and dependent on other students in carrying out tasks, an increase in the character of discipline as evidenced by students carrying out learning activities in accordance with the steps of the activities provided and suitable in utilizing time and collecting assignments in accordance with the specified time (JAYA et al., 2014).

This can be proven from the results of the meta-analysis conducted and based on the calculation of the effect size value based on several relevant articles used that the implementation of teaching materials integrated with Islamic values in the field of science is very influential to develop the character of students, especially at the elementary school level. In addition, the lack of data on a handful of sub-indicators of the implementation of teaching materials integrated with Islamic values in the field of science to develop the character of students interpreted in the articles found can affect the value of the accuracy of the results obtained (Yuan et al., 2008). The results of this meta-analysis are also given limitations because they only apply to a few selected studies so that they require generalization and interpretation of the results as material for consideration (Lambrinou et al., 2012).

Conclusion

Based on meta-analysis research that has been carried out using a sample of 5 relevant scientific articles in all levels of education that are used as reference calculations, the results show that the effect size value of the effect of the implementation of teaching materials integrated with Islamic values in the field of science to develop the character of students is 1.04 and is classified in the high category. Therefore, the interpretation of the effect size value of the effect of the implementation of teaching materials integrated with Islamic values with the dependent variable, namely character development in learning, is 84%. This explains that the implementation of teaching materials integrated with Islamic values has a high influence

to increase the effectiveness of the character development of students in science learning at all levels of education.

Reference

Agung, I., Suardana, I., & ... (2022). E-Modul IPA dengan Model STEM-PjBL Berorientasi Pendidikan Karakter untuk Meningkatkan Hasil Belajar Siswa. *Jurnal Imiah Pendidikan …*, *Query date: 2023-04-18 21:18:36*. https://ejournal.undiksha.ac.id/index.php/JIPP/article/view/42657

Aulianingsih, I., Vitrianingsih, D., & ... (2021). Validitas e-module IPA terintegrasi nilai-nilai agama Islam pada pokok bahasan energi di SMP kelas VII. *Jurnal Ilmiah …*, *Query date: 2023-04-19 00:13:53*. http://digilib.iain-palangkaraya.ac.id/4495/

Ayu, D., Triwoelandari, R., & Fahri, M. (2019). Media pembelajaran powtoon terintegrasi nilai-nilai agama pada pembelajaran IPA untuk mengembangkan karakter. *Al-Adzka: Jurnal Ilmiah Pendidikan …*, *Query date: 2023-04-19 06:39:40*. https://core.ac.uk/download/pdf/327227396.pdf

Billah, A. (2016). Pendidikan Karakter untuk Anak Usia Dini dalam Perspektif Islam dan Implementasinya dalam Materi Sains. *ATTARBIYAH: Journal of Islamic Culture and …*, *Query date: 2023-04-18 21:09:48*. http://attarbiyah.iainsalatiga.ac.id/index.php/attarbiyah/article/view/577

Coe, R. (2021). Effect Size 39. *Research Methods and Methodologies in Education*, *Query date: 2023-04-04 08:45:24*. https://books.google.com/books?hl=en&lr=&id=pFMlEAAAQBAJ&oi=fnd&pg=PA393&dq=coe+effect+size&ots=_-_-b_rIJL&sig=mtzdJgXin4t_c6cnfuDVQESFZzw

Cohen, J. (2013). *Statistical power analysis for the behavioral sciences*. taylorfrancis.com. https://doi.org/10.4324/9780203771587

Cooper, H., Hedges, L., & Valentine, J. (2019). *The handbook of research synthesis and meta-analysis*. books.google.com. https://books.google.com/books?hl=en&lr=&id=tfeXDwAAQBAJ&oi=fnd&pg=PR5&dq=the+handbook+of+research+synthesis+and+%22meta+analysis%22+2nd+edition&ots=RMsDks9N0X&sig=zHCKTdzLtoBrsCgZKOEaG2-hfYw

Faizah, S. (2022). Pengembangan modul IPA berbasis integrasi Islam dan sains dengan pendekatan inkuiri di MI Salafiyah Kutukan Blora. *At-Thullab: Jurnal Pendidikan Guru Madrasah …*, *Query date: 2023-04-18 23:41:38*. http://journalfai.unisla.ac.id/index.php/at-thulab/article/view/80

Gunawan, R., Suyitno, S., & ... (2018). Nilai Pendidikan Karakter Religius dan Cinta Tanah Air Novel Rantau 1 Muara Karya Ahmad Fuadi. *… : Jurnal Pemikiran Islam*, *Query date: 2023-04-18 23:36:07*. https://e-journal.metrouniv.ac.id/index.php/akademika/article/view/1238

Hakim, M., & Rahayu, F. (2019). Pembelajaran Saintifik Berbasis Pengembangan Karakter. *Nazhruna: Jurnal Pendidikan Islam*, *Query date: 2023-04-18 21:21:39*. https://www.e-journal.ikhac.ac.id/index.php/NAZHRUNA/article/view/148

Handrianto, B. (2021). *Islamisasi Sains*. *Query date: 2023-04-19 06:41:44*.

Hildayatni, D., Triwoelandari, R., & Hakiem, H. (2019). Pengaruh penggunaan modul pembelajaran IPA terintegrasi nilai agama terhadap peningkatan karakter rasa ingin tahu siswa. *Muallimuna: Jurnal Madrasah …*, *Query date: 2023-04-18 22:15:56*. https://core.ac.uk/download/pdf/235209861.pdf

Irwandani, I. (2016). Potensi Media Sosial dalam Mempopulerkan Konten Sains Islam. *Tadris: Jurnal Keguruan dan Ilmu Tarbiyah*, *Query date: 2023-04-18 23:49:03*. http://www.ejournal.radenintan.ac.id/index.php/tadris/article/view/1065

JAYA, I., Sadia, I., & Arnyana, I. (2014). Pengembangan perangkat pembelajaran biologi bermuatan pendidikan karakter dengan setting guided inquiry untuk meningkatkan karakter dan hasil belajar siswa …. *Jurnal pendidikan …*, *Query date: 2023-04-19 00:20:22*. https://ejournal-pasca.undiksha.ac.id/index.php/jurnal_ipa/article/view/1065

Kurdi, M. (2018). Evaluasi Implementasi Desain Pendidikan Karakter Berbasis Pendekatan Humanistik. *Elementary: Jurnal Iilmiah Pendidikan Dasar*, *Query date: 2023-04-19 06:38:09*. https://e-journal.metrouniv.ac.id/index.php/elementary/article/view/1243

Lambrinou, E., Kalogirou, F., Lamnisos, D., & ... (2012). Effectiveness of heart failure management programmes with nurse-led discharge planning in reducing re-admissions: A systematic review and meta-analysis. *International journal of …*, *Query date: 2023-04-04 09:03:44*. https://www.sciencedirect.com/science/article/pii/S0020748911004238

Makmun, M. (2014). Pengembangan Pembelajaran IPA (Sains) dan IPS di Madrasah Ibtidaiyah (Berbasis Integrasi Interkoneksi). *Terampil: Jurnal Pendidikan dan …*, *Query date: 2023-04-18 22:13:17*. http://www.ejournal.radenintan.ac.id/index.php/terampil/article/view/1307

Mudlofir, A. (2011). Aplikasi pengembangan kurikulum tingkat satuan pendidikan dan bahan ajar dalam pendidikan agama Islam. *Jakarta: Raja Grafindo Persada*, *Query date: 2023-04-19 04:04:56*.

Mukti, F. (2018). Literasi sains dan pendidikan karakter di era globalisasi. *Jurnal Abdau: Jurnal Pendidikan Madrasah …*, *Query date: 2023-04-18 21:29:15*. https://pdfs.semanticscholar.org/dda4/46efb69ee1d0fc935c4a798aaaa2454021c8.pdf

Muslimah, F., Triwoelandari, R., & ... (2018). Pengaruh Media Pembelajaran IPA Terintegrasi Nilai-Nilai Islam dalam Mengembangkan Karakter Religius Siswa Kelas 5 Sekolah Dasar. *… Annual Conference on …*, *Query date: 2023-04-19 06:33:21*. https://vicon.uin-suka.ac.id/index.php/ACoMT/article/view/951

Muspiroh, N. (2013). Integrasi nilai Islam dalam pembelajaran IPA (perspektif pendidikan Islam). *Jurnal Pendidikan Islam*, *Query date: 2023-04-18 22:10:53*. https://www.academia.edu/download/70659848/557.pdf

Nisa, U., Yuliani, H., Syar, N., & ... (2021). Meta Analisis Pengembangan E-Modul Berbantuan Sigil Pada Pembelajaran Fisika. *… : Jurnal Pendidikan Fisika*, *Query date: 2023-04-04 09:08:20*. http://e-journal.uniflor.ac.id/index.php/optika/article/view/960

Nurjanah, F., Triwoelandari, R., & ... (2018). Pengembangan bahan ajar tematik terintegrasi nilai-nilai Islam dan sains untuk meningktakan karakter religius siswa. *Pendas: Jurnal Ilmiah …*, *Query date: 2023-04-18 23:38:35*. https://journal.unpas.ac.id/index.php/pendas/article/view/1393

OECD, R. (2019). Programme for international student assessment (PISA): Results from PISA 2018. *OECD.*, *Query date: 2023-04-18 23:45:29*.

Rahma, S., & Agustin, H. (2021). Profil implementasi model integrated pada pembelajaran IPA di indonesia (2012-2021). *Jurnal Inovasi Penelitian Dan …*, *Query date: 2023-04-18 21:13:48*. https://www.journal.iel-education.org/index.php/JIPPMas/article/view/1

Sarnawi, M. (2012). Implementasi Pendidikan Karakter dalam Pembelajaran Sains di Sekolah Dasar. *Disertasi. Bandung: UPI*, *Query date: 2023-04-18 23:54:02*.

Sauri, S. (2010). Membangun karakter bangsa melalui pembinaan profesionalisme guru berbasis pendidikan nilai. *Jurnal Pendidikan Karakter*, *Query date: 2023-04-19 00:11:13*. https://www.academia.edu/download/54782100/makalah_karakter_guru.pdf

Susilowati, S. (2017). Pengembangan bahan ajar IPA terintegrasi nilai Islam untuk meningkatkan sikap dan prestasi belajar IPA siswa. *Jurnal Inovasi Pendidikan IPA*, *Query*

date: 2023-04-19 04:02:02. https://journal.uny.ac.id/index.php/jipi/article/view/13677

Utami, I., Triwoelandari, R., & ... (2019). Pengaruh modul pembelajaran ipa terintegrasi nilai agama terhadap pengembangan karakter mandiri siswa. *Jurnal Pendidikan Dasar …*, *Query date: 2023-04-18 21:23:47*. http://ojs.unpkediri.ac.id/index.php/pgsd/article/view/13036

Wisudawati, A. (t.t.). Eka Sulistyowati. 2014. *Metodologi Pembelajaran IPA. Jakarta: PT Bumi …*, *Query date: 2023-04-19 05:44:06*.

Yopy, M. (2013). Pembuatan Modul Fisika Berbasis TIK untuk Mengintegrasikan Nilai Pendidikan Karakter dalam Pembelajaran Siswa SMAN 10 Padang Kelas X …. *Pillar of Physics Education*, *Query date: 2023-05-03 13:29:42*.

Yuan, Y., Gao, Y., Zhao, J., & Mao, L. (2008). Characterization and stability evaluation of β-carotene nanoemulsions prepared by high pressure homogenization under various emulsifying conditions. *Food research international*, *Query date: 2023-04-04 09:05:35*. https://www.sciencedirect.com/science/article/pii/S0963996907001627