ISSN: 2252-8822, DOI: 10.11591/ijere.v12i3.25122

Character and moral education based learning in students' character development

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Article Info

Article history:

Received Aug 2, 2022 Revised Apr 12, 2023 Accepted May 15, 2023

Keywords:

Character development Character education Morals Systematic literature review

ABSTRACT

Internet-based learning is mostly done because of the industrial revolution and COVID-19 so it has an impact on shifting the students' character. The systematic literature review research purpose was to analyze and provide an overview related to learning based on character and moral education in the student's character development. Data related to character and moral education (2020-2022) was collected through the Indonesian National Library and Google Scholar for documentation which will then be reviewed. After the screening, 25 articles were selected for analysis using the Miles & Huberman interactive model and thematic analysis to obtain answers to review questions. These findings provided information about various methodologies and research results related to the student's character and moral education. The results showed that students' moral character development was influential and related to learning outcomes, self-character, and performance, as well as contributing to students' mental health. So that efforts can be made in developing and strengthening student character through internal education strategies, such as material content containing character values, local wisdom-based learning, as well as the use of character-based learning models, methods and media, and external strategies in the form of parental support and society.

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1. INTRODUCTION

In the era of independent learning, the 5.0 industrial revolution, as well as the current COVID-19 pandemic have caused more internet-based learning to be carried out. This is very influential on the impact of shifting students' character and moral values due to the lack of direct students' interaction with teachers and their peers. This causes students to lack respect for teachers and lacks the value of caring, have no ethics, and even rampant bullying. Besides, many students are indifferent to school assignments due to the free and misused of the internet, especially in the use of social media, not to mention the lack of attention from teachers and parents to the student's character and moral development. Thus, with the current conditions, it is necessary to develop and strengthen the value of the student's moral character to help students establish good social relationships so that they can judge what is right and wrong so that cases of violations of social norms and rules that are often heard can be minimized [1], [2]. With various conveniences and freedoms in using the internet, it is necessary to instill good and correct values in students through character and moral education to translate abstract principles about the moral character value to be able to overcome the problems of attitude and behavior that are phenomenal in the current era [3].

Journal homepage: http://ijere.iaescore.com

Character education is related to morals. A nation will have good morality if students have good character and moral values. Students need to get a character education to produce a moral nation [4]. To support this, it is necessary to play a role in the family, school, and community [2], [5], [6]. Children who are educated and nurtured by parenting, education, and a good environment produce children who develop and have character strengths, have a noble and good character [3], [4]. Students who have strong characters, good morals, and noble are able to maintain their mental health and protect themselves from stress and depression due to the COVID-19 and the negative impacts of social interactions including bullying [3], [4], [7].

There are six pillars of character: trust, respect, responsibility, justice, caring, and citizenship. The six pillars can be taught to students through parenting in the family, the learning process at school, as well as socialization, and interaction in the community through example. Trust is related to honesty; children are taught to always be honest in speaking and acting so that children will gain trust. Respect is related to mutual respect and courtesy, children are taught from an early age how to queue, salute both parents and teachers, and another etiquette in the association. Responsibility teaches children to always have the courage to bear what is their obligation and the consequences of what they do. For children to become responsible people, parents and teachers provide examples and stimuli about the responsibility to children, how children should behave to the work given, and the problems they face.

Justice is related to equality of rights and obligations. Thus, parents and educators can provide incentives and examples of how to be fair. This can be taught through a variety of pair or group games that must children to follow the applicable rules and how to play without any demands to win in various ways. So that children will get used to not being selfish and cheating to get something. Caring is related to sensitivity to the surrounding environment, such as caring for plants, feeding pets, visiting sick friends, helping parents and teachers, and so on. Citizenship is related to love for the homeland and defending the country. Children are taught to become citizens with character and morals as a form of love for the homeland because the character and morals of citizens affect the character and morals of the nation [4]. Character education-based learning becomes a very important issue/thing because the character and moral education is a form of strengthening and developing values. There were 18 character values that can be integrated into learning through the syllabus, lesson plans, materials, and assignments given to students [5], [8].

There have been many research publications related to character and moral education, such as raising cyber bullying, social media, and character education [1], [6], subject matter that is integrated with character values [5], [9], [10], learning media [11]-[14], models, strategies, and learning methods [15]-[17], character education based on local wisdom values [18]-[20], religiosity [21]-[23], self-characters [7], [24]-[27], academic achievement [28], [29], school programs [6], [9], [30]–[32], teacher roles [5], [33], [34], and parents role [5], [6], [23]. With so many various studies, a research study was conducted to find out the character and moral education description in the students' character development and strengthening which is the purpose of this research. The previous research that used a systematic literature review only raised topics related to supporting and challenges in the implementation of character education [8], [18]. Therefore, this systematic literature study examines character education-based learning that is reviewed and analyzed regarding the development and strengthening of student character through the learning process, school culture and school programs, the impact on students, and the role of the environment. The research review questions (RQ) are: i) How are character and moral education articles distributed by geographic location? (RQ1); ii) Where did the source of the articles come from? (RQ2); iii) What methodologies are used in character and moral education articles? (RQ3); iv) How is character and moral education implemented in learning? (RQ4); v) How do school traditions/culture support character and moral education? (RQ5); vi) How does character and moral education impact students? (RQ6); and vii) How does the role of the environment support character and moral education in students? (RQ7).

2. RESEARCH METHOD

To explain and describe the character and moral education in learning, the systematic literature review is used as a research method. Systematic literature review provides a "roadmap" that contributes to identifying, selecting, finding, guiding, providing understanding and description, as well as analyzing and evaluating something [35]–[38]. The systematic literature review in this study follows the preferred reporting items for systematic reviews and meta-analyses (PRISMA) model as presented in Figure 1 which has several stages. The stages are the identification stage, the screening stage, the eligibility stage, and the inclusion stage [35], [38]–[41].

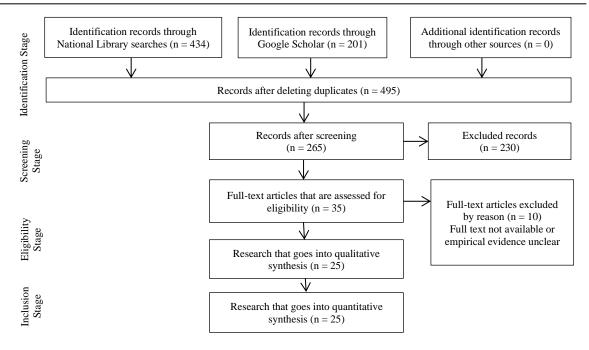


Figure 1. PRISMA flowchart

2.1. Identification stage

Identification stage is the article search stage which is carried out systematically or structured. It is through Google Scholar and the National Library which is linked to the databases of Bibliomed, DOAJ, EBSCO, ERIC, ProQuest, PubMed, ResearchGate, ScienceDirect, and Taylor & Francis with the keywords "Character building", "Character education", or "Moral education". The selection of articles in the database is intended to increase the integrity and credibility of this research [40].

2.2. Screening stage

It is divided into two, deleting duplicate articles and deleting articles that do not meet the established criteria [42]–[44]. The criteria for reviewing articles in this study are: i) English articles; ii) Articles reviewed related to learning; iii) Articles focusing on character education or moral education; and iv) Articles published in international journals in 2020-2022. If one of the criteria is not met, the article will be discarded.

2.3. Eligibility stage

The eligibility stage is an advanced analysis and evaluation of articles that have been screened to answer review questions that have been formulated previously so that inclusion bias does not occur [36], [39], [41]. Review questions which are the foundation for reviewing, exploring, and synthesizing articles in a structured or systematic manner [45]. The articles are used to provide data and information about effectiveness, correlation, influence, comparison, significance, or improvement. Articles must meet the related eligibility criteria: i) Learning; ii) Tradition/school culture; iii) Impact on students; and iv) The role of the environment in supporting character and moral education. These four points are also the themes in the research that are the topics of discussion. Articles were examined and selected with predetermined criteria so that 25 articles were eligible for review. If the articles did not meet the eligibility criteria, then the articles were not used to avoid publication bias.

2.4. Inclusion stage

Inclusion stage is where the selected articles are written and elaborated. The findings form the basis for answering the review questions. In this study, the data were analyzed using the interactive model of Miles & Huberman [46]: i) Data collection with the keywords "Character Education", "Character Building", and "Moral Education"; ii) Data reduction, articles are selected according to criteria and analyzed thematically by summarizing, coding, tracing themes, and create groups, such as geographic location, literature sources, research methodology, and explanations on the four selected topics, learning, school traditions/culture, students, and the role of the environment. Thematic analysis is used to identify themes related to research patterns and trends [35]; iii) Data presentation, the compilation of data based on groups by making tabulations; and iv) Drawing conclusions based on findings derived from review questions.

3. RESULTS AND DISCUSSION

3.1. Geographic location

To answer RQ1, 25 articles were analyzed related to the country of origin. Based on the results of the analysis, Indonesia ranks first with 68%, meaning that articles from Indonesia contribute as many as 17 articles in describing the character and moral education. The other findings are shown in Figure 2.

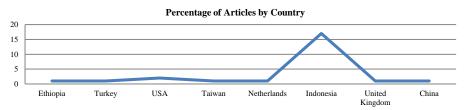


Figure 2. Classification based on geographical location

3.2. Source of the articles

The RQ2 question is answered by classifying 25 articles based on the source they are obtained. Based on Table 1, it can be seen that the selection of articles comes from reputable journals and has a good ranking so that it can provide credibility and integrity to the research results [40], [47], [48]. Therefore, this research can provide a quality contribution and become a reference in providing information related to character and moral education.

Table 1. Classification of selected literature based on rank, source, and journal identity Journal ranking Journal name SJR 2021 Percentage (%) Source Amount Educational Review Taylor & Francis 1.08 01 1 Personality and Individual Differences ScienceDirect 1.18 4 Taylor & Francis 2.06 Studies in Science Education Frontiers in Psychology Pubmed 0.87 4 Q2 Journal of Social Studies Education Research **ERIC** 0.39 4 International Journal of Instruction **ERIC** 0.5 16 RMLE Online Taylor & Francis 0.54 4 Q3 Cakrawala Pendidikan DOAJ 0.24 2 8 European Journal of Educational Research **ERIC** 0.31 4 International Journal of Evaluation and Research **ERIC** 0.24 in Education Q4 Journal of Educational and Social Research ResearchGate 0.14 4 None Elementary Education Online Bibliomed 8 The European Educational Researcher **ERIC** 4 International Journal of Multicultural and Google Scholar 4 Multireligious Understanding Journal of Character Education ProQuest 4 Elementary Education Online **EBSCO** 8 2 Universal Journal of Educational Research **ERIC** 4

ScienceDirect

ResearchGate

4

3.3. Methodology of 25 articles

The researcher conducted an analysis related to the research methodology used in the 25 articles presented in Table 2. The most widely used collection tool was observation and the most widely used analysis was the t-test. The findings also provide valuable insight into the instrument and how data was collected and analyzed. Quantitative research is dominated by the use of questionnaires as a data collection tool and statistically analyzed such as analysis of variance, t-tests, and so on. The sampling technique used also varied, ranging from random sampling, purposive sampling, and convenience sampling [49]. Qualitative research is dominated by the use of interviews, documentation, and observation as data collection tools. Qualitative analysis is used such as interactive analysis of the Miles & Huberman model, thematic and content analysis, and so on. Research subjects used purposive and convenience sampling techniques [50], [51]. Mixed Methods Research uses a combination of quantitative and qualitative data collection, data analysis, and sampling [52]. While development research is dominated by observation and documentation in data collection by using a combination of quantitative and qualitative analysis techniques. Research subjects also used convenience sampling [53].

Social Sciences & Humanities Open

Webology

Table 2. Research methodology used in 25 articles

		Table 2. Research	methodology used in	25 articles		
Research methods	Types of research	Sampling	Data collection	Data analysis	Amount	Percentage
Quantitative	Path analysis	Convience sampling	Questionnaire	Factor analysis, Regression, ANOVA	1	4%
		Cluster random sampling	Questionnaire, Test	SEM, t-test, ANOVA	1	4%
		Random sampling	Questionnaire	Descriptive statistics, Correlation, Multiple regression analysis	1	4%
	Experiment	Purposive sampling	Test	Descriptive analysis, t-test, ANCOVA	1	4%
			Questionnaire, Observation	Quantitative analysis, Descriptive analysis	1	4%
	Quasi experiment	Random sampling	Observation, Test	Descriptive statistics, ANCOVA	1	4%
		Convience sampling	Observation, Test	ANOVA, t-test, Mann- Whitney test	1	4%
		Proportional random sampling		Regression, t-test, ANOVA	1	4%
	Meta-analysis	Purposive sampling	Literature	Correlation meta-analysis	1	4%
	Descriptive	Purposive sampling	Questionnaire	SEM	1	4%
	Correlation	Purposive sampling	Questionnaire	t-test, ANOVA	1	4%
Qualitative	Phenomenological	Purposive sampling	Interview, Observation, Questionnaire, Documentation	Miles & Huberman interactive model, Qualitative analysis	1	4%
		Purposive sampling, Snowball sampling	Interview, Observation, Documentation	Miles & Huberman interactive model	1	4%
	Case study	Purposive sampling	Interview, Observation, Documentation	Miles & Huberman interactive model	1	4%
	Multi case study	Convience sampling	Interview, Observation, FGD	Constant comparative method	1	4%
	Explorative	Purposive sampling	Literature	Descriptive analysis, Content analysis	1	4%
	Descriptive	Convience sampling	Interview, Observation, Documentation	Inductive analysis	1	4%
			Interview	Thematic analysis	1	4%
	Systematic literature review	Purposive sampling	Literature	Thematic analysis	2	8%
	Ethnography	Convience sampling	Interview, Observation, Documentation	Spradley model analysis	1	4%
Mixed		Random sampling,	Questionnaire,	Descriptive statistics,	1	4%
methods R&D		Purposive sampling	Document	Thematic Analysis		
		Convience sampling	Observation, Interview, FGD, Documentation	Interactive analysis	1	4%
			Observation, Documentation	Data mining analysis, Thematic analysis, Descriptive statistics, t-test, ANCOVA	1	4%
			Questionnaire, Test, Observation	Descriptive statistics, t-test	1	4%

3.4. Supporting character and moral education in learning

There are 10 articles discussing models, strategies, learning media, and others that support character and moral education in schools. Based on Table 3, the findings obtained that an integrated learning model application with local culture affects the students' character and morals [15]. The game method in learning is very efficient in improving the children's character quality, especially in social skills [12]. Character-based learning models and learning media are effective in improving the learning and developing students' character and morals quality [8], [11], [14], [16]. Local wisdom-based learning can also be integrated into learning through values and aesthetics to support and influence students' character and morals, such as a culture of shame associated with faith, compassion, honesty, respect, cooperation, sincerity, and hard work [18], [19]. The use of e-assessment and literacy skills to read fiction (fairy tales and legends), as well as the simulation/practice in economics learning application has a very good effect on the student's character and moral development [13], [17], [32].

In addition, the use of digital cartoon learning media can also be an alternative learning media that can develop a democratic, sympathetic (peace-loving), responsible, and religious attitude character [11]. The cultivation of character and moral education can also be carried out through intra-curricular activities, such as the integration of character education into the syllabus, character actualization programmed in the lesson

plans, emotionally charged materials, and giving assignments and good examples in class. As well as through extracurricular activities such as entrepreneurial activities [5], [8], [13], [14], [18], [32].

Most of the research discusses the character education-based learning problem related to models, strategies, or learning media that are integrated with cultural values and local wisdom, such as cartoon digital media and Edutech smart e-learning, game and simulation methods, flipped classroom, and mood understand, recall, digest, expand, review or MURDER strategy. In other words, the application of various models, methods, and learning strategies based on character education and local wisdom will be better, more effective, and efficient for the formation, development, and strength of students' character and morals [11], [12], [14]–[17]. With well-considered learning, it will affect the students' character and morals [8]. Learning based on character education and local wisdom can support the formation and development of students' character and morals [6], [15], [18], [19], [21].

Table 3. Learning that supports character and moral education

Factors	Findings	
Learning media	Cartoon digital media	
	e-assessment	
	Local wisdom-based books	
Learning methods/strategies	Thematic games	
	Simulation	
	MURDER strategy	
	Challenge-based instructional design	
Learning model	Flipped classroom (FCLCV)	
	Didactic design research (DDR)	
	Inquiry-oriented e-learning design	

3.5. School traditions and culture support character and moral education

In Table 4, the articles are grouped by tradition/school culture that supports moral and character education. Out of 25 articles, eight articles answered RQ5. The findings show that teaching character and moral education based on local wisdom can be integrated through habituation and training, providing examples, as well as creating and civilizing character situations based on local wisdom [18]. Because of the school's cultural base importance in implementing character education programs, a vision based on character and moral values can be achieved through internal and external education strategies consisting of habituation, role models, internalization, and character and moral values integration in learning and extracurricular activities [21], [30]. The internal strategy focuses on learning activities in the classroom and forming a school environment that supports school programs [9], [30].

Table 4. Traditions/school cultures that support character and moral education

4. Traditions/senoor editares that support character and moral educations				
Factors	Findings			
Learning	Based on local wisdom			
	Using a character education-based learning model			
School culture/traditions	Religious			
	Implementation of character education			
School program	Strengthening character education			
	Pedagogy			

In the internal education strategy, the teacher plays an important role such as clarifying and articulating the character understanding in classroom learning [33]. In addition, the curriculum used must include at least one character in learning outcomes in various domains (affective, cognitive, and psychomotor) [31]. The application of discipline and positive commitment in schools to carry out habituation and character culture for students by local wisdom and surrounding culture is also a form of a good strategy to develop character and moral education [6]. Students are encouraged to reflect on their values (good or bad) such as applying good character and avoiding bad character which involves commitment, self-confidence, and self-efficacy [8], [17]. Students also need to be encouraged to understand the prevailing norms through habituation and the learning process in schools so that students have high self-control and religiosity which can affect the formation of students' good character [54]. However, in the activity of creating and cultivating character education in the school environment, it must have its challenges, such as the lack of socialization, training, and the lack of facilities and infrastructure that support the development of character education. Not to mention the difficulties of the teacher and the inability to assess the student's character (affective) and the failure to be a good role model for students for character and moral education [5].

3.6. The impact of character and moral education on students

There are 10 articles discussing the impact of character and moral education. The findings obtained are based on the data in Table 5, namely, there is a significant relationship and improvement between character education and learning achievement [28], [29]. In addition, there are significant differences in learning outcomes between Edutech smart e-learning based on character education and those that do not use this learning method [14]. Learning media based on character education is also able to improve the quality of learning so that it is effective in improving student learning outcomes. Characters shown by learning outcomes are interdependence, sensitivity, social skills (cooperation and responsibility), courtesy, kindness, patriotism/citizenship, and respect [11]. Character and moral education are also related, influential, and significantly better on learning outcomes, motivation, creativity, performance, experience, self-efficacy, as well as perceptions of integrity, virtue, and moral reasoning [14], [15], [24], [25], [28], [29], [33]. Students who can develop character will have a positive effect on their moral reasoning and judgment, especially in decision-making [8]. The strength of students' character and morals was significantly negatively correlated with perceived stress on COVID-19 and symptoms of depression [7]. Strength of character also helps in the self-regulation of students in taking attitudes and reflecting on self-worth which has a positive effect on students' moral character involving commitment, self-confidence, and self-efficacy [8], [33].

Table 5. Impact of character and moral education on students

Factor	Findings	
Impact	t Academic achievement	
	Self-character	
	Performance	

3.7. The role of the environment support character and moral education

There are nine articles that discuss the role of teachers, parents, and society. Based on Table 6, the findings obtained that the role of the environment also participates in building and developing students' character. Starting from the role of parents, school residents, to the community [30]. Internal strategies related to activities in the school environment that can be applied with various policies such as creating character education-based school programs and character education-based learning [55]. External strategies related to the involvement of family and community roles [23].

Table 6. The role of the environment in supporting character and moral education

Factors	Findings
Schools	School program
	School culture/tradition
Parents	Parenting
	Personality
	Role
Public	Attention
	Participation
	Supervision

In schools, teachers play an important role which is a source of strengthening students' character in clarifying and articulating their understanding of the character in the learning process, as well as exemplary and good personality in social behavior at school, such as respecting and caring for others [18], [33], [34]. The role of the family is also very important in shaping the students' character, such as attention, participation, and supervision. Positive parenting has a significant relationship with the role of parents in developing and strengthening students' character [23], [56].

Besides that, the religious attitude possessed by parents and educators helps students reflect on the value of good moral character because religiosity is a good mediator in the development of students' moral character [21]–[23]. If students perform a behavior that is contrary to the values of good moral character, then parents and educators can provide advice to help students realize their inappropriate actions and encourage them to make changes to better behavior or minimize the occurrence of shifts in character and morals values unsuitable. Parents and teachers can teach these values through fairy tales and bedtime songs or other emotionally charged materials in classroom learning activities [5], [8].

The community also takes part in shaping the students' character, from the government to residents. The support provided can be in the form of socialization and training, as well as supporting facilities and infrastructure for character building and development. The lack of social control over easily accessible social

media also affects students' relationships and communication patterns which will have an impact on the development of their moral character [6].

Social media also plays a role in influencing the development of students' moral character. Lack of control in accessing social media can affect students' relationships and communication patterns [6]. Often some various actions and behaviors violate good values through social media such as bullying, so parents need to supervise the actions and behavior of these students [1], [2].

4. CONCLUSION

Internet-based learning is mostly done because of the industrial revolution so it affects the students' character development both positively and negatively. To minimize the occurrence of a shift in character and moral values in a negative direction such as bullying, it is necessary to develop students' character and morals through character-based learning. The student's character and moral development can be realized through internal and external educational strategies. Internal education strategies are related to the role of schools and school members in supporting the students' moral character development and strengthening, such as providing examples, carrying out habituation and a culture of discipline and positive commitment, integrating and actualizing character and moral education into the syllabus, lesson plans, and emotionally charged materials, as well as through extracurricular activities. External education strategies are related to the families and community members' participation in providing examples, attention, participation, and supervision of students' actions/behaviors related to moral character values. Students' character strength will affect learning outcomes, self-characters, and performance; so that they can protect and contribute to maintaining mental health which has an impact on mindsets in determining attitudes or actions.

REFERENCES

- S. Waters, W. B. Russell, and M. Hensley, "Cyber bullying, social media, and character education: Why it matters for middle school social studies," *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, vol. 93, no. 4, pp. 195–204, 2020, doi: 10.1080/00098655.2020.1760770.
- [2] W. Jhon, Sugito, E. Zubaidah, and A. Mustadi, "Challenges in the implementation of character education in elementary school: Experience from Indonesia," İlköğretim Online, vol. 20, no. 1, pp. 1351–1363, 2021, doi: 10.17051/ilkonline.2021.01.130.
- [3] S. Mustoip, M. Japar, and Zulela MS, Implementation of character education. Surabaya: Jakad Publishing (in Indonesian), 2018.
- [4] O. S. Hidayat, Children's character education according to 21st century learning. Jakarta: Edura-UNJ (in Indonesian), 2020.
- [5] W. Birhan, G. Shiferaw, A. Amsalu, M. Tamiru, and H. Tiruye, "Exploring the context of teaching character education to children in preprimary and primary schools," *Social Sciences & Humanities Open*, vol. 4, no. 1, p. 100171, 2021, doi: 10.1016/j.ssaho.2021.100171.
- [6] A. Hermino and I. Arifin, "Contextual character education for students in the senior high school," European Journal of Educational Research, vol. 9, no. 3, pp. 1009–1023, 2020, doi: 10.12973/EU-JER.9.3.1009.
- [7] Q. Liu and Z. Wang, "Perceived stress of the COVID-19 pandemic and adolescents' depression symptoms: the moderating role of character strengths," *Personality and Individual Differences*, vol. 182, no. 199, 2021, doi: 10.1016/j.paid.2021.111062.
- [8] T. Van Der Leij, L. Avraamidou, A. Wals, and M. Goedhart, "Supporting secondary students' morality development in science education," *Studies in Science Education*, vol. 58, no. 2, pp. 141–181, 2022, doi: 10.1080/03057267.2021.1944716.
- [9] Aningsih, M. S. Zulela, A. Neolaka, V. Iasha, and B. Setiawan, "How is the education character implemented? the case study in Indonesian elementary school," *Journal of Educational and Social Research*, vol. 12, no. 1, pp. 371–380, 2022, doi: 10.36941/jesr-2022-0029.
- [10] S. Sukadari, S. Suyata, and A. S. Kuntoro, "Ethnographic research on school culture in character education in elementary schools," (in Indonesian) *Jurnal Pembangunan Pendidikan: Fondasi dan Aplikasi*, vol. 3, no. 1, pp. 58–68, 2015, doi: 10.21831/jppfa.v3i1.7812.
- [11] A. Trisiana, A. Sutikno, and A. G. Wicaksono, "Digital media-based character education model as a learning innovation in the midst of a corona pandemic," *Webology*, vol. 17, no. 2, pp. 103–117, 2020, doi: 10.14704/WEB/V1712/WEB17019.
- [12] A. Pramono, Pujiyanto, B. D. Puspasari, and N. S. Dhanti, "Character thematic education game 'AK@R' of society themes for children with Malang Indonesian visualize," *International Journal of Instruction*, vol. 14, no. 2, pp. 179–196, 2021.
- [13] T. Ningsih, D. M. Yuwono, M. S. Sholehuddin, and A. W. B. Suharto, "The significant of e-assessment for Indonesian literacy with character education in pandemic era," *Journal of Social Studies Education Research*, vol. 12, no. 4, pp. 231–256, 2021.
- [14] I. K. Suartama et al., "Development of e-learning oriented inquiry learning based on character education in multimedia course," European Journal of Educational Research, vol. 9, no. 4, pp. 1591–1603, 2020, doi: 10.12973/EU-JER.9.4.1591.
- [15] A. Jamaluddin, S. Zubaidah, S. Mahanal, and A. Gofur, "The effect of integrated flipped classroom with local cultural values on character building in higher education," İlköğretim Online, vol. 20, no. 2, pp. 54–66, 2021, doi: 10.17051/ilkonline.2021.02.11.
- [16] M. Maulana, A. A. Rahman, and M. Aminah, "MURRDERR strategy: Developing creative characters of elementary school prospective teachers," *International Journal of Instruction*, vol. 15, no. 1, pp. 547–564, 2022, doi: 10.29333/iji.2022.15131a.
- [17] F. Amri, E. Djatmika, H. Wahyono, and S. Widjaja, "The effect of using simulation on developing students' character education in learning economics," *International Journal of Instruction*, vol. 13, no. 4, pp. 375–392, 2020, doi: 10.29333/iji.2020.13424a.
- [18] N. A. Hidayati, H. J. Waluyo, R. Winarni, and Suyitno, "Exploring the implementation of local wisdom-based character education among Indonesian higher education students," *International Journal of Instruction*, vol. 13, no. 2, pp. 179–198, 2020, doi: 10.29333/iji.2020.13213a.
- [19] A. Bin Jamaluddin, S. Zubaidah, S. Mahanal, and A. Gofur, "Exploration of the Indonesian Makassar-Buginese Siri' educational values: The foundation of character education," *International Journal of Evaluation and Research in Education (IJERE)*, vol. 11, no. 1, pp. 10–19, 2022, doi: 10.11591/ijere.v11i1.21670.

- N. F. Istiawati, "Character Education based on Ammatoa Indigenous Local Wisdom Values in Developing Conservation Characters," (in Indonesian), Cendekia, vol. 10, no. 1, pp. 1–18, 2016, doi: 10.30957/cendekia.v10i1.78.
- [21] F. N. Hayati, S. Suyatno, and E. Susatya, "Strengthening of religious character education based on school culture in the Indonesian secondary school," The European Educational Researcher, vol. 3, no. 3, pp. 87-100, 2020, doi: 10.31757/euer.331.
- S. S. Dewi, S. Sutrisno, A. Madjid, and F. M. Suud, "The teacher efficacy in developing character education of integrated Islamic schools students in Indonesia," İlköğretim Online, vol. 20, no. 1, pp. 1431–1439, 2021, doi: 10.17051/ilkonline.2021.01.134.
- R. R. Diana, M. Chirzin, K. Bashori, F. M. Suud, and N. Z. Khairunnisa, "Parental engagement on children character education: the influences of positive parenting and agreeableness mediated by religiosity," Cakrawala Pendidikan, vol. 40, no. 2, pp. 428-444, 2021, doi: 10.21831/cp.v40i2.39477.
- H. C. Hsiao, "Effects of defense suppliers' practice of online character education on the employees' learning motivation and perception of integrity during COVID-19," Frontiers in Psychology, vol. 12, pp. 1-5, 2021, doi: 10.3389/fpsyg.2021.771124.
- T. Harrison, E. Burn, and F. Moller, "Teaching character: Cultivating virtue perception and virtue reasoning through the curriculum," *Educational Review*, vol. 72, no. 5, pp. 617–634, 2020, doi: 10.1080/00131911.2018.1538937.
- R. D. Utami, "Building character of Muhammadiyah elementary education students through identification of character education implementation in schools," (in Indonesian), Profesi Pendidikan Dasar, vol. 2, no. 1, pp. 32-40, 2015, [Online]. Available: http://journals.ums.ac.id/index.php/ppd/article/view/1542.
- A. T. Daga, "Implementation of character education during the COVID-19 pandemic in elementary school," (in Indonesian), Primary: Jurnal Pendidikan Guru Sekolah Dasar, vol. 10, no. 4, p. 836, 2021, doi: 10.33578/jpfkip.v10i4.8448.
- K. Khadijah, I. Suciati, K. Khaerani, A. Manaf, and S. Sutamrin, "Schools' character education values and students' mathematics learning achievement: A meta-analysis," Cakrawala Pendidikan, vol. 40, no. 3, pp. 670-683, 2021, doi: 10.21831/cp.v40i3.39924.
- M. MacDonnell, K. McClain, A. Ganguli, and M. J. Elias, "It's not all or nothing: exploring the impact of a social-emotional and character development intervention in the middle grades," RMLE Online, vol. 44, no. 2, pp. 1-15, 2021, doi: 10.1080/19404476.2020.1868226.
- J. D. Saputro and M. Murdiono, "Implementation of character education through a holistic approach to senior high school students," International Journal of Multicultural and Multireligious Understanding, vol. 7, no. 11, pp. 460-470, 2020, doi: 10.18415/ijmmu.v7i11.2146.
- N. Temiz, "Analysis of 1st grade social studies curriculum of 2018 in terms of character education," Elementary Education Online, vol. 19, no. 4, pp. 2370-2381, 2020, doi: 10.17051/ilkonline.2020.764337.
- [32] S. R. Rindrayani, "The implementation of character education in Indonesia high school curriculum program," Universal Journal of Educational Research, vol. 8, no. 1, pp. 304-312, 2020, doi: 10.13189/ujer.2020.080137.
- K. Nygreen and K. Mcdermott, "Teachers' perspectives on performance character education: meanings, practices, and tensions," Journal of Character Education, vol. 17, no. 1, pp. 1-19, 2021.
- Lukman et al., "Effective teachers' personality in strengthening character education," International Journal of Evaluation and Research in Education (IJERE), vol. 10, no. 2, pp. 512-521, 2021, doi: 10.11591/ijere.v10i2.21629.
- N. I. N. Ahmad and S. N. Junaini, "Augmented reality for learning mathematics: A systematic literature review," International Journal of Emerging Technologies in Learning, vol. 15, no. 16, pp. 106-122, 2020, doi: 10.3991/ijet.v15i16.14961.
- M. M. Koehorst, A. J. A. M. van Deursen, J. A. G. M. van Dijk, and J. de Haan, "A systematic literature review of organizational [36] factors influencing 21st-century skills," SAGE Open, vol. 11, no. 4, 2021, doi: 10.1177/21582440211067251.
- J. Lämsä, R. Hämäläinen, P. Koskinen, J. Viiri, and E. Lampi, "What do we do when we analyse the temporal aspects of computer-supported collaborative learning? a systematic literature review," Educational Research Review, vol. 33, Jun. 2021, doi: 10.1016/j.edurev.2021.100387.
- J. H. Eggers, R. Oostdam, and J. Voogt, "Self-regulation strategies in blended learning environments in higher education: A systematic review," Australasian Journal of Educational Technology, vol. 37, no. 6, pp. 175-192, 2021, doi: 10.14742/ajet.6453.
- B. Anthony et al., "Blended learning adoption and implementation in higher education: A theoretical and systematic review," Technology, Knowledge and Learning, vol. 27, pp. 531-578, 2022, doi: 10.1007/s10758-020-09477-z.
- M. Kalogiannakis, S. Papadakis, and A. I. Zourmpakis, "Gamification in science education. A systematic review of the literature," Education Sciences, vol. 11, no. 1, pp. 1-36, 2021, doi: 10.3390/educsci11010022.
- I. Suciati, D. S. Wahyuni, and N. Sartika, "Mathematics learning innovation during the COVID-19 pandemic in Indonesia: A systematic literature review," Jurnal Kependidikan: Jurnal Hasil Penelitian dan Kajian Kepustakaan di Bidang Pendidikan, Pengajaran dan Pembelajaran, vol. 7, no. 4, p. 886, 2021, doi: 10.33394/jk.v7i4.3833.
- [42] B. Stevanny and R. A. Syakurah, "The use of peer role-play in doctor-patient communication skills training for medical students: A systematic review," International Journal of Evaluation and Research in Education (IJERE), vol. 11, no. 3, pp. 1066-1073, 2022, doi: 10.11591/ijere.v11i3.21901.
- E. P. Chaw and E. Kopp, "Coping issues as a topic in teacher education research: A systematic literature review," Acta Didactica [43] Napocensia, vol. 14, no. 2, pp. 44–58, 2021, doi: 10.24193/adn.14.2.4.

 M. H. Roslan and C. J. Chen, "Educational data mining for student performance prediction: A systematic literature review (2015-
- 2021)," International Journal of Emerging Technologies in Learning, vol. 17, no. 5, 2022, doi: 10.3991/ijet.v17i05.27685.
- H. Altinpulluk and M. Kesim, "A systematic review of the tendencies in the use of learning management systems," Turkish Online Journal of Distance Education, vol. 22, no. 3, pp. 1-14, 2021, doi: 10.17718/tojde.961812.
- I. Suciati, W. H. Mailili, and Hajerina. "Geogebra implementation on students' mathematical ability in learning: A systematic literature review," (in Indonesian), Teorema: Teori dan Riset Matematika, vol. 7, no. 1, pp. 27-42, 2022, doi: 10.25157/teorema.v7i1.5972.
- R. K. Meet and D. Kala, "Trends and future prospects in MOOC researches: A systematic literature review 2013-2020," Contemporary Educational Technology, vol. 13, no. 3, 2021, doi: 10.30935/cedtech/10986.
- [48] Y. Yamada, "How to protect the credibility of articles published in predatory journals," Publications, vol. 9, no. 1, pp. 1-9, 2021, doi: 10.3390/publications9010004.
- H. K. Mohajan, "Quantitative research: A successful investigation in natural and social sciences," Journal of Economic Development, Environment and People, vol. 9, no. 4, pp. 50-79, Dec. 2020, doi: 10.26458/jedep.v9i4.679.
- B. F. Akinyode and T. H. Khan, "Step by step approach for qualitative data analysis," International Journal of Built Environment and Sustainability, vol. 5, no. 3, pp. 163-174, 2018, doi: 10.11113/ijbes.v5.n3.267.
- J. Sutton and Z. Austin, "Qualitative research: Data collection, analysis, and management," Canadian Journal of Hospital Pharmacy, vol. 68, no. 3, pp. 226-231, 2015, doi: 10.4212/cjhp.v68i3.1456.
- M. Sandelowski, "Focus on research methods: Combining qualitative and quantitative sampling, data collection, and analysis [52] techniques in mixed-method studies," Research in Nursing and Health, vol. 23, no. 3, pp. 246-255, 2000, doi: 10.1002/1098-

240x(200006)23:3<246::aid-nur9>3.0.co;2-h.

[53] S. Gustiani, "Research and development (R&D) method as a model design in educational research and its alternative," *Holistics Journal*, vol. 11, no. 2, pp. 12–22, 2019.

- [54] N. Susilowati, I. N. Aeni, and A. P. Wijaya, "Examining religiosity to determine student ethical behavior intention," *International Journal of Evaluation and Research in Education (IJERE)*, vol. 11, no. 3, pp. 1107–1115, 2022, doi: 10.11591/ijere.v11i3.22185.
- [55] W. Wuryandani, B. Maftuh, Sapriya, and D. Budimansyah, "Discipline character education in elementary school," (in Indonesian), Jurnal Cakrawala Pendidikan, vol. 2, no. 2, pp. 286–295, 2014, doi: 10.21831/cp.v2i2.2168.
- [56] S. Astuti, D. Rukmana, and P. Pramudiani, "The role of teachers and parents to improve children's motivational learning in pandemic situation," *International Journal of Evaluation and Research in Education (IJERE)*, vol. 11, no. 3, pp. 1162–1170, 2022, doi: 10.11591/ijere.v11i3.22583.

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