Character Education Learning Model for Elementary School Children

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Abstract: The world of education at this time faces many challenges in various fields. Education programs at the level of elementary school children are not evenly distributed resulting in the expected results not being maximized. The Law on the National Education System Number 20 of 2003 article 3 states that national education functions to develop capabilities and form dignified national character and civilization in the context of educating the nation's life, aiming at developing the potential of students to become human beings who believe and fear God Almighty. One, having noble character, healthy, knowledgeable, capable, creative, independent and being a democratic and responsible citizen. This study aims to see the effectiveness of the character education learning model applied in elementary schools. The results of field trials found the fact that after trials using the character education learning model for elementary school children were able to facilitate and improve student learning outcomes and could create appropriate and effective learning and motivate students in character learning.

Keyword: learning models, character education, elementary school children

INTRODUCTION

The world of education at this time faces many challenges in various fields. Education programs at the level of elementary school children are not evenly distributed resulting in the expected results not being maximized. National education is expected to be able to improve the quality of human resources who are educated and have character. These resources, in this case students are expected not only to understand the theories presented in class but they can practice these theories in everyday life. The formation and development of this character can be done through integrated learning with the school curriculum ¹.

The Law on the National Education System Number 20 of 2003 article 3 states that national education functions to develop capabilities and form dignified national character and civilization in the context of educating the nation's life, aiming at developing the potential of students to become human beings who believe and fear God Almighty. One, having noble character, healthy,

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¹ Kementerian Pendidikan dan Kebudayaan» Republik Indonesia, "Target Kemendikbud Dalam Pengembangan Pendidikan Dan Kebudayaan Tahun 2017," *Kementerian Pendidikan Dan Kebudayaan*.

knowledgeable, capable, creative, independent and being a democratic and responsible citizen ². Character education is a process to develop in each student an awareness of being a citizen with dignity, independence and sovereignty and the ability to maintain and maintain that independence and sovereignty. Therefore, awareness from students is needed to make this happen ³. Schools and teachers must educate character, especially through teaching that can develop respect and responsibility ⁴. Planting and developing character education in schools is a shared responsibility. Character education can be integrated into learning in each subject. Every subject related to norms or values in each subject needs to be developed, made explicit, linked to the context of everyday life ⁵.

Character education values according to Permendiknas No. 2 of 2010 include: Religious, Honest, Tolerance, Discipline, Hard Work, Creative, Independent, Democratic, Curiosity, National Spirit, Love of the Motherland, Respect for Achievement, Friendly or Communicative, Love Peace, Love to Read, Care for the Environment, Care for Social, Responsibility.

Meanwhile, the five main priority characters for Strengthening Character Education (PKK), namely religious, integrity, independence, nationalism and mutual cooperation were initiated by the Ministry of Education and Culture in line with efforts to succeed the National Movement for Mental Revolution (GNRM) initiated by President Joko Widodo. In this case, the priority institution is basic education, starting from early childhood, elementary, then junior high school. Character education in Indonesia is a national movement to create schools in fostering ethical, responsible young people, because character education places more emphasis on universal value aspects. Character education quality (CEQ) is a standard used to recommend that education is an effective way to develop student character ⁶.

Character education is a system of instilling character values in school members which includes components of knowledge, awareness or will, and actions to carry out these values, both towards God Almighty (YME), oneself, others, the environment, and nationality. so that they become perfect human beings ⁷.

In line with the above thinking, character education is needed to build a national culture with character. Character education is not obtained from birth but through a process. Therefore the formation of character education can be done by integrating it into the eyes of students through the learning process.

Why models? Models help us conceptualize representations of reality. A model is a simple

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² Sisdiknas, "UU No. 20 Tahun 2003 Tentang Sistem Pendidikan Nasional [JDIH BPK RI]," last modified 2003, accessed July 8, 2022, https://peraturan.bpk.go.id/Home/Details/43920/uu-no-20-tahun-2003.

³ Jacqueline Grennon Brooks and Martin G Brooks, *In Search of Understanding: The Case for Constructivist Classrooms* (Ascd, 1999).

⁴ Farida Nugrahani, Mukti Widayati, and Ali Imron A.M, "PENGEMBANGAN MODEL PENDIDIKAN KARAKTER MELALUI GERAKAN LITERASI SEKOLAH BERBASIS FILM," *BELAJAR BAHASA* (2019); Diah Puji Nali Brata, Agung Kesna Mahatmaharti, and Muh Barid Nizarudin Wajdi, "The Principal Leadership Style in Developing Discipline Character," *International Journal of Psychosocial Rehabilitation* 24, no. 7 (2020): 9579–9588.

⁵ Novi Irwan Nahar, "Penerapan Teori Belajar Behavioristik Dalam Proses Pembelajaran," *NUSANTARA: jurnal ilmu pengetahuan sosial* 1, no. 1 (2016).

⁶ Xin Tang et al., "Profiles of Teaching Practices and Reading Skills at the First and Third Grade in Finland and Estonia," *Teaching and Teacher Education* 64 (2017): 150–161.

⁷ Francesco Colace, Massimo De Santo, and Luca Greco, "E-Learning and Personalized Learning Path: A Proposal Based on the Adaptive Educational Hypermedia System," *International Journal of Emerging Technologies in Learning (iJET)* 9, no. 2 (2014): 9, http://dx.doi.org/10.3991/ijet.v9i2.3211.

representation of more complex forms, processes and functions of physical phenomena or ideas. Models, of necessity, simplify reality because often reality is to complex to portray. Since much of that complexity is unique to specific situations, models help by identifying what is generic and applicable across multiple contexts ⁸. Why models? Models help us conceptualize actual events. Models are simple representations of forms, processes, and functions of complex physical phenomena or ideas. Models, of course, simplify reality because relativity is often complicated to describe. Because many complexities are unique to specific situations,

The learning model compiled has not been directed based on specific learning that is adapted to the characteristics of teaching materials and the characteristics of students, so that it has not been able to develop attitudes, creativity and knowledge competencies about local excellence which can be used as sources of ideas and learning resources ⁹. This research was conducted with the aim of looking at the effectiveness of the character education learning model applied to elementary school children.

METHODS

This study uses the Research and Development method adopting the development model of Hannafin and Peck. Each stage in this research is carried out systematically according to the application of the development model used. Design and development research departs from learning problems in the classroom that require learning materials that suit the needs of students and educators. Therefore the purpose of development research is to produce products that suit the needs of students and educators in achieving learning objectives.

Research and development methods facilitate learning about new models, tools, and procedures so that we can be trusted to anticipate them effectively and efficiently. In this way, we can determine the relevance of context-specific findings to other learning and learning environments and identify general principles of new design, development, and evaluation.

RESULT AND DISCUSSION

Model Grouping

According to Gredler¹⁰ "the taxonomy has three categories, indicating whether a given model is best applied for developing (1) individual classroom instruction, (2) produce for implementation by users other than the developers, or (3) larger and more complex instructional systems directed at an organization's problems or goals." Gustafson and Brach classify learning models into 3 groups based on the orientation of the use of the model, namely: (1) Classroom Oriented Model; (2) product-oriented learning design model (Product Oriented Model); (3) system-oriented learning design model (System Oriented Model).

Following is a more detailed explanation of the three learning design models: Classroom Oriented Model This model can be used by educators and students with learning activities taking place in a class with a predetermined time. This model can be implemented from elementary school to higher education. This model has the following characteristics:

⁸ Pedro Gil-Madrona et al., "Scale of Pedagogical Authority Meanings in the Classroom (ESAPA) for Ibero-America Built on the Opinions of Teaching Students," *Teaching and Teacher Education* 93 (2020): 103079, http://dx.doi.org/10.1016/j.tate.2020.103079.

⁹ Fiona Suwana and Lily, "Empowering Indonesian Women through Building Digital Media Literacy," *Kasetsart Journal of Social Sciences* 38, no. 3 (2017): 212–217, http://dx.doi.org/10.1016/j.kjss.2016.10.004.

¹⁰ Alf Inge Wang et al., Introducton to Gamification, International Journal of Computer Games Technology, 2010.

- a. Relatively more components.
- b. Not infrequently aspects of improvement are also included in it.
- c. Very attentive to students.
- d. Hints that there is an aspect of classroom management.
- e. Implies the teacher's role in conveying the material.
- f. Can be applied by the instructor himself without a special team.
- g. Does not cover a particular subject.

The 4 learning design development models that are often and suitable for use in the classroom environment, namely: (1) the Gerlach and Ely Model; (2) ASSURE models; (3) Newby, Stepich, Lehman and Russell models; (4) Morrison, Ross and Kemp models; (5) Model Heinich, Molenda, Russell and Smallindo.

Based on the problems found in the needs analysis ¹¹, to overcome this, it is necessary to design and develop self-learning based learning models in order to improve the quality of achieving the goals to be achieved, both process goals and outcome goals. Before carrying out an analysis of the self-based learning model, the researcher first carried out the following steps:

Results Identification of General Learning Objectives

Based on the results of the needs analysis that has been put forward, the general learning objectives can be identified as in table 1 below:

Table 1. Results of Identification of General Learning Objectives

Component	Discussion Material
Material	Integrity Character Education
Target	Grade 1 Elementary School Students
General Learning	After participating in integrity character education
Objectives	lessons, first grade students can understand integrity
	character education correctly and appropriately.

Learning Analysis Results

Learning analysis is carried out so that the learning products produced are in accordance with the applicable curriculum and the characteristics of students and their environment. This process is carried out by describing general behavior into specific behavior that is arranged logically and systematically, after consultation with several material experts. The process of learning analysis in this study can be seen in table 2 below:

Table 2. Results of Learning Analysis

Component	General Learning Objectives		
General Learning	After participating in integrity character education lessons, first		
Objectives	grade elementary school students can understand character		
	education correctly and appropriately.		
General Conduct	Integrity Character Education		
Special Behavior	Introducing yourself, getting to know new friends, counting,		
	writing, reading, knowing body parts, naming body parts,		
	counting body parts, writing body parts, knowing the functions		
	of body parts, and caring for body parts.		

¹¹ Suparman Atwi, "Desain Instruksional Modern," PT Erlangga Jakarta (2014).

- 1. Grade 1 SD students can introduce themselves by saying their name correctly.
- 2. Grade 1 SD students can name their new friends correctly.
- 3. Grade 1 elementary school students can get to know the ethnic origin of their new friends correctly.
- 4. Grade 1 elementary school students can count their new friends correctly.
- 5. Grade 1 SD students can write letters correctly.
- 6. 1st grade students can write numbers correctly.
- 7. Grade 1 elementary school students can identify squares and circles correctly.
- 8. Grade 1 SD students can tell stories in front of the class and read properly.
- 9. Grade 1 elementary school students can identify body parts correctly.
- 10. Grade 1 elementary school students can count body parts correctly and precisely.
- 11. Grade 1 elementary school students can write body parts correctly and precisely.
- 12. Grade 1 SD students can read body parts by singing while playing.
- 13. Grade 1 elementary school students can recognize the function of body parts correctly and precisely.
- 14. Grade 1 elementary school students can treat body parts properly.
- 15. Studentgrade 1 Elementary School can mention the means of cleaning the body correctly and precisely.

Results of Identification of Behavior and Initial Characteristics of Students

After the learning analysis is complete, the next step is to identify the behavior and initial characteristics of students with semi-formal interviews with teachers during non-learning hours and make observations. The results of the identification carried out are as follows: (1) the target population of the learning products developed are grade 1 students at SD Negeri 2 Selakau Tua, Selakau District, Sambas Regency, (2) students with diverse background groups, (3) each class has an average number - an average of 30-35 students, (4) the majority of students are dominated by the lower middle class, (5) in each class there are students who have high, medium, and low absorption, but are dominated by the medium absorption group, (6) there are also students who quickly get bored with monotonous learning,

The overall behavior and initial characteristics are the input for the developer to adjust the product to be developed. In general, the initial characteristics of students at SD Negeri 2 Selakau Tua, Selakau District, Sambas Regency have studied in early childhood education so they already have a basic education.

Results of Formulation of Specific Learning Objectives

The next step is to formulate specific learning objectives, carried out by considering the results of the identification of students' behavior and initial characteristics as well as the learning analysis that has been stated previously. For complete formulation of specific learning objectives can be seen in table 3 below:

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Table 3.	Results	of the	Formul	ation	of St	pecific	Learning	Obi	ectives
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	118 01	the Formulation of Specific Learning Objectives
Component	4	Specific Learning Objectives
Main Subject Sub	1.	Grade 1 SD students can show themselves to say their name
Theme 1	_	confidently.
	2.	Grade 1 elementary school students can name their new
	_	friends respectfully and correctly.
	3.	Grade 1 elementary school students can appreciate the ethnic origin of their new friends well.
	4.	Grade 1 elementary school students can count their new
	-	friends enthusiastically and correctly.
	5.	Grade 1 elementary school students can write letters seriously and correctly.
	6.	Grade 1 elementary school students can identify numbers accurately.
	7.	7
	0	and right shapes.
Main Diagramia Cal	8.	Grade 1 elementary school students can tell stories and read
Main Discussion Sub		boldly.
Theme 2	1.	Grade 1 elementary school students can recognize body parts by imitating the behavior of their parents/teachers.
	2.	Grade 1 elementary school students can count body parts
	2	correctly and precisely.
	3.	Grade 1 elementary school students can write body parts by following the rules of auxiliary lines.
	4.	Grade 1 elementary school students can read body parts in front of the class boldly.
	5	Grade 1 elementary school students can recognize the
	٦.	function of body parts by imitating the words of
		parents/teachers.
	6.	Grade 1 elementary school students can take care of body parts with full responsibility.
	7	Grade 1 elementary school students can name and maintain
	1.	body hygiene items with full responsibility.

Benchmark Reference Test Development Results

The benchmark reference test developed is used to measure students' success in mastering the behavior that has been set in the specific learning objectives. In measuring students' success in mastering the material used a test in the form of questions of 10 items. Test reference indicators and test questions can be seen in table 4 below:

Table 4. Skills Test Indicators and Questions

There were the transfer and good to the		
Indicator	Question	
Answer the question	What is your full name?	
	What is your nickname?	
	What's your teacher's name?	
	Name three of your friends!	

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Learn to writeThicken linesRecognize lettersBold the letters below?Recognize the shape of theLook for items that are square and circular?objectFigure numbers using symbols according to the exampleRecognize letters

Learning Strategy Development Results

After developing a benchmark reference test, the next step is to develop a learning strategy that will be determined. The learning strategy developed is a learning strategy with hypercontent learning media, learning activities are carried out with the help of learning hypercontent media. Students are divided into several groups and each student is given hypercontent learning media. Students are provided with hypercontent-based character learning textbooks, as well as opportunities to study them. This is done because it is to identify deficiencies or weaknesses in character education textbooks based on hypercontent, both material, instructional objectives and learning outcomes. In accordance with the main objective of developing hypercontent-based character education textbooks to improve the learning outcomes of elementary school children. In addition, the criteria for field trials are conducting tests to see the learning outcomes of integrity character education by conducting pre-tests and post-tests. Likewise with the responses of students who studied using hypercontent-based character education textbooks following developer learning according to the learning materials that had been carried out starting from the initial steps. The comparison of the average value of the initial and final test results of this field trial can be seen in table 5 below:

Table 5. Pre-test and post-test results for field trials

Average value	Average value			
Pre-test	Post-test			
73.31	83.0			

Based on the results of the pre-test and post-test in the field trial showed an increase in post-test results, so it can be concluded that learning with hypercontent-based electronic textbooks can improve student learning outcomes and the feasibility of hypercontent-based electronic textbooks can be used in the learning process of character education for elementary school children.

Discussion

The learning materials used have been revised based on the assessment of a team of learning material experts, learning design experts, and learning media experts and tested with field trials, with prospective users, namely first graders of elementary schools to find out the effectiveness of the product being developed.

Based on the results of the pre-test and post-test in the field trial showed an increase in post-test results, so it can be concluded that learning with hypercontent-based electronic textbooks can improve learning outcomes and the effectiveness of hypercontent-based electronic textbooks used in integrity character education for first grade students elementary school. This result is supported by Nie's opinion which states that media is effective in increasing the use of study time, especially short breaks during the workday, new strategies in reading subject matter and low cost.¹².

¹² Ming Nie et al., "How Do E-Book Readers Enhance Learning Opportunities for Distance Work-Based Learners?," Research in Learning Technology 19, no. 1 (2011): 19–38, http://dx.doi.org/10.1080/09687769.2010.548506.

This research is also supported by researchers Sousa and Rocha ¹³ who state that digital learning can be a driving force for learning development ¹⁴. Also supported by researchers Hawlitschek and Joeckel ¹⁵ that digital media can motivate students to improve learning outcomes, improve performance, and performance satisfaction in digital media ¹⁶. Students increasingly need to learn content and perspectives that are not provided as part of the curriculum, students need to build additional forms of support for learning through digital media ¹⁷. Digital media learning that successfully handles distractions in the form of social-cognitive conflict resolution and productive friction is indispensable for learning and knowledge construction ¹⁸.

Students' previous learning experiences and how they play a role in responses to e-learning experiences¹⁹. Objects using text, images, audio, and video elements make stories more interesting²⁰, and effective learning²¹, can increase student interest, achievement and confidence in learning²². Hypermedia to find the most suitable set of content for each student has proven to be effective in learning²³.

This research is also supported by researchers Bajrami and Ismaili ²⁴ by using appropriate media, as well as video material that can be improved by teachers and ensure student-centeredness, interest and involvement in activities actively, motivated and confident in improving competence.²⁵Also supported by researchers Layona, Yulianto, and Tunardi ²⁶ to increase students' understanding of the material²⁷. In general, believe in students, that the media can help learning²⁸.

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¹³ Maria José Sousa and Álvaro Rocha, "Digital Learning: Developing Skills for Digital Transformation of Organizations," *Future Generation Computer Systems* 91 (2019): 327–334, http://dx.doi.org/10.1016/j.future.2018.08.048.

¹⁴ Sousa and Rocha, "Digital Learning: Developing Skills for Digital Transformation of Organizations"; Ulrike Cress et al., "Issues and Trends in Instructional Technology: Consistent Growth in Online Learning, Digital Content, and the Use of Mobile Technologies. In: Branch R. (Eds) Educational Media and Technology Yearbook," *Educational Media and Technology Yearbook, Springer, Cham* 17, no. 1 (2018): 61–71.

¹⁵ Anja Hawlitschek and Sven Joeckel, "Increasing the Effectiveness of Digital Educational Games: The Effects of a Learning Instruction on Students' Learning, Motivation and Cognitive Load," *Computers in Human Behavior* 72 (2017): 79–86, http://dx.doi.org/10.1016/j.chb.2017.01.040; Nisaul Barokati, Nizarudin Wajdi, and Muh Barid, "Application Design Library With Gamification Concept," *Jurnal Lentera: Kajian Keagamaan, Keilmuan dan Teknologi* 3, no. 1 (2017): 93–102; Nisaul Barokati Seliro Wangi, M Hafidh Nashrullah, and Muh Barid Nizarudin Wajdi, "Digital Era's Education and Aplication in Higher Education," *EDUTEC: Journal of Education And Technology* 1, no. 2 (2018): 119–128.

^{16 (}Sarti, 2017)

¹⁷ Sten Ludvigsen et al., "Developing Understanding beyond the given Knowledge and New Methodologies for Analyses in CSCL," *International Journal of Computer-Supported Collaborative Learning* (2018): 359–364.

¹⁸ (Holtz et al., 2018)

¹⁹ (Erdem et al., 2013)

²⁰ Didik Dwi Prasetya and Tsukasa Hirashima, "Design of Multimedia-Based Digital Storybooks for Preschool Education," *International Journal of Emerging Technologies in Learning (iJET)* 13, no. 02 (2018): 211, http://dx.doi.org/10.3991/ijet.v13i02.8188.

²¹ Jarudin, Nurdin Ibrahim, and Suyitno Muslim, "Develop Self-Directed Instructional Media for Wushu Training," *International Journal of Science and Research (IJSR)* 7, no. 11 (2018): 1748–1754.

²² (Chen & Liu, 2019)

²³ F. Colace, M. De Santo, and L. Greco, "E-Learning and Personalized Learning Path: A Proposal Based on the Adaptive Educational Hypermedia System," *International Journal of Emerging Technologies in Learning* 9, no. 2 (2014): 9–16; Jarudin, Ibrahim, and Muslim, "Develop of Hyperlinks Media to Learn Basic Wushu Techniques."

²⁴ Lumturie Bajrami and Merita Ismaili, "The Role of Video Materials in EFL Classrooms," *Procedia - Social and Behavioral Sciences* 232 (2016): 502–506, http://dx.doi.org/10.1016/j.sbspro.2016.10.068.

²⁵ Bajrami and Ismaili, "The Role of Video Materials in EFL Classrooms."

²⁶ Rita Layona, Budi Yulianto, and Yovita Tunardi, "Authoring Tool for Interactive Video Content for Learning Programming," *Procedia Computer Science* 116 (2017): 37–44, http://dx.doi.org/10.1016/j.procs.2017.10.006.

²⁷ Layona, Yulianto, and Tunardi, "Authoring Tool for Interactive Video Content for Learning Programming."

²⁸ (Jarudin, et al., 2020)

CONCLUSION

Based on the results of field trials, it was found that after trials using the character education learning model for elementary school children were able to facilitate and improve student learning outcomes and could create proper and effective learning and motivate students in character learning which could be done anytime, anywhere without the limits of space and time.

REFERENCES

- Atwi, Suparman. "Desain Instruksional Modern." PT Erlangga Jakarta (2014).
- Bajrami, Lumturie, and Merita Ismaili. "The Role of Video Materials in EFL Classrooms." *Procedia* Social and Behavioral Sciences 232 (2016): 502–506. http://dx.doi.org/10.1016/j.sbspro.2016.10.068.
- Barokati, Nisaul, Nizarudin Wajdi, and Muh Barid. "Application Design Library With Gamification Concept." *Jurnal Lentera: Kajian Keagamaan, Keilmuan dan Teknologi* 3, no. 1 (2017): 93–102
- Bock, A., A. Modabber, K. Kniha, M. Lemos, N. Rafai, and F. Hölzle. "Blended Learning Modules for Lectures on Oral and Maxillofacial Surgery." *British Journal of Oral and Maxillofacial Surgery* (2018): 6.
- Brata, Diah Puji Nali, Agung Kesna Mahatmaharti, and Muh Barid Nizarudin Wajdi. "The Principal Leadership Style in Developing Discipline Character." *International Journal of Psychosocial Rehabilitation* 24, no. 7 (2020): 9579–9588.
- Brooks, Jacqueline Grennon, and Martin G Brooks. In Search of Understanding: The Case for Constructivist Classrooms. Ascd, 1999.
- Chan, Yuen May. "Video Instructions as Support for beyond Classroom Learning." *Procedia Social and Behavioral Sciences* 9 (2010): 1313–1318.
- Chen, Zhiwei, and Ying Liu. "The Different Style of Lifelong Learning in China and the USA Based on Influencing Motivations and Factors." *International Journal of Educational Research* 95 (2019): 13–25. http://dx.doi.org/10.1016/j.ijer.2019.03.005.
- Colace, F., M. De Santo, and L. Greco. "E-Learning and Personalized Learning Path: A Proposal Based on the Adaptive Educational Hypermedia System." *International Journal of Emerging Technologies in Learning* 9, no. 2 (2014): 9–16.
- Colace, Francesco, Massimo De Santo, and Luca Greco. "E-Learning and Personalized Learning Path: A Proposal Based on the Adaptive Educational Hypermedia System." *International Journal of Emerging Technologies in Learning (iJET)* 9, no. 2 (2014): 9. http://dx.doi.org/10.3991/ijet.v9i2.3211.
- Cress, Ulrike, G. Stahl, C. Rose, N. Law, S. Ludvigsen, Maria José Sousa, Álvaro Rocha, et al. "Issues and Trends in Instructional Technology: Consistent Growth in Online Learning, Digital Content, and the Use of Mobile Technologies. In: Branch R. (Eds) Educational Media and Technology Yearbook." *Educational Media and Technology Yearbook, Springer, Cham* 17, no. 1 (2018): 61–71.
- Erdem, Mukaddes, Ferhat Kadir Pala, and Turgay Baş. "A Usability Study of an Online Instructional Multi-Media Discussion Environment." *Procedia Social and Behavioral Sciences* 83 (2013): 786–792. http://dx.doi.org/10.1016/j.sbspro.2013.06.148.
- Gil-Madrona, Pedro, Luz Marina Méndez Hinojosa, José Jaime Pérez-Segura, María Belén Sáez-Sánchez, and Guillermo Zamora Poblete. "Scale of Pedagogical Authority Meanings in the Classroom (ESAPA) for Ibero-America Built on the Opinions of Teaching Students." *Teaching and Teacher Education* 93 (2020): 103079. http://dx.doi.org/10.1016/j.tate.2020.103079.

EDUCATIO: Journal Of Education Volume 7, Number 4, February 2023 ISSN: 2579-8383 (Print) ISSN: 2579-8405 (Online)

- Hawlitschek, Anja, and Sven Joeckel. "Increasing the Effectiveness of Digital Educational Games: The Effects of a Learning Instruction on Students' Learning, Motivation and Cognitive Load." *Computers in Human Behavior* 72 (2017): 79–86. http://dx.doi.org/10.1016/j.chb.2017.01.040.
- Holtz, Peter, Joachim Kimmerle, and Ulrike Cress. "Using Big Data Techniques for Measuring Productive Friction in Mass Collaboration Online Environments." *International Journal of Computer-Supported Collaborative Learning* 13, no. 4 (2018): 439–456. http://dx.doi.org/10.1007/s11412-018-9285-y.
- Jarudin, Nurdin Ibrahim, and Suyitno Muslim. "Develop of Hyperlinks Media to Learn Basic Wushu Techniques." *Journal of Computational and Theoretical Nanoscience* 17, no. 2 (2020): 825–832. http://dx.doi.org/10.1166/jctn.2020.8725.
- ——. "Develop Self-Directed Instructional Media for Wushu Training." *International Journal of Science and Research (IJSR)* 7, no. 11 (2018): 1748–1754.
- Kementerian Pendidikan dan Kebudayaan» Republik Indonesia. "Target Kemendikbud Dalam Pengembangan Pendidikan Dan Kebudayaan Tahun 2017." *Kementerian Pendidikan Dan Kebudayaan*.
- Layona, Rita, Budi Yulianto, and Yovita Tunardi. "Authoring Tool for Interactive Video Content for Learning Programming." *Procedia Computer Science* 116 (2017): 37–44. http://dx.doi.org/10.1016/j.procs.2017.10.006.
- Li, Jing. "The Culturally Significant Key Component of Qigong, 'Heart Adjustment', Is Lost in Translation' (2017).
- Liu, Renming, Shukai Li, and Lixing Yang. "Collaborative Optimization for Metro Train Scheduling and Train Connections Combined with Passenger Flow Control Strategy." *Omega* (2018).
- Ludvigsen, Sten, Ulrike Cress, Carolyn P. Rosé, Nancy Law, and Gerry Stahl. "Developing Understanding beyond the given Knowledge and New Methodologies for Analyses in CSCL." *International Journal of Computer-Supported Collaborative Learning* (2018): 359–364.
- Nahar, Novi Irwan. "Penerapan Teori Belajar Behavioristik Dalam Proses Pembelajaran." NUSANTARA: jurnal ilmu pengetahuan sosial 1, no. 1 (2016).
- Nie, Ming, Alejandro Armellini, Gabi Witthaus, and Kelly Barklamb. "How Do E-Book Readers Enhance Learning Opportunities for Distance Work-Based Learners?" Research in Learning Technology 19, no. 1 (2011): 19–38. http://dx.doi.org/10.1080/09687769.2010.548506.
- Nugrahani, Farida, Mukti Widayati, and Ali Imron A.M. "PENGEMBANGAN MODEL PENDIDIKAN KARAKTER MELALUI GERAKAN LITERASI SEKOLAH BERBASIS FILM." BELAJAR BAHASA (2019).
- Prasetya, Didik Dwi, and Tsukasa Hirashima. "Design of Multimedia-Based Digital Storybooks for Preschool Education." *International Journal of Emerging Technologies in Learning (iJET)* 13, no. 02 (2018): 211. http://dx.doi.org/10.3991/ijet.v13i02.8188.
- Robbins, J. G., and B. S Jones. Effective Communication for Today's Manage. Store Age Books. Chain, 2018.
- Rohman, Baeti, Jarudin, and Prajka Ibnu Khuzaimah. "Development of Digital Media for Learning Arabic Al- Qur' an Language for Blind Students." *International Journal of Psychosocial Rehabilitation* 24, no. 06 (2020): 10451–10458.
- Sartika, Rini. "Increasing the Effectiveness of Digital Educational Games: The Effects of a Learning Instruction on Students' Learning, Motivation and Cognitive Load." *Computers in Human Behavior* 72 (2017): 79–86.
- Sisdiknas. "UU No. 20 Tahun 2003 Tentang Sistem Pendidikan Nasional [JDIH BPK RI]." Last modified 2003. Accessed July 8, 2022. https://peraturan.bpk.go.id/Home/Details/43920/uu-no-20-tahun-2003.

EDUCATIO : Journal Of Education Volume 7 , Number 4, February 2023 ISSN : 2579-8383 (Print) ISSN : 2579-8405 (Online)

- Sousa, Maria José, and Álvaro Rocha. "Digital Learning: Developing Skills for Digital Transformation of Organizations." *Future Generation Computer Systems* 91 (2019): 327–334. http://dx.doi.org/10.1016/j.future.2018.08.048.
- Suwana, Fiona, and Lily. "Empowering Indonesian Women through Building Digital Media Literacy." *Kasetsart Journal of Social Sciences* 38, no. 3 (2017): 212–217. http://dx.doi.org/10.1016/j.kjss.2016.10.004.
- Suwiwa, I G, I W Santyasa, and I M Kirna. "Development of Interactive Multimedia Learning in Pencak Silat Theory and Practice Courses." *e-Journal Program Pascasarjana Universitas Pendidikan Ganesha* 4 (2014).
- Tang, Xin, Eve Kikas, Eija Pakarinen, Marja-Kristiina Lerkkanen, Joona Muotka, and Jari-Erik Nurmi. "Profiles of Teaching Practices and Reading Skills at the First and Third Grade in Finland and Estonia." *Teaching and Teacher Education* 64 (2017): 150–161.
- Wang, Alf Inge, Bian Wu, D. Burgos, Pablo Moreno-ger, J. L. Sierra, Baltasar Fernandez-Manjon, M. Specht, et al. *Introducton to Gamification*. *International Journal of Computer Games Technology*, 2010.
- Wangi, Nisaul Barokati Seliro, M Hafidh Nashrullah, and Muh Barid Nizarudin Wajdi. "Digital Era's Education and Aplication in Higher Education." *EDUTEC: Journal of Education And Technology* 1, no. 2 (2018): 119–128.

EDUCATIO : Journal Of Education Volume 7 , Number 4, February 2023 ISSN : 2579-8383 (Print) ISSN : 2579-8405 (Online)