



# Character Development Through Collaboration Between Teachers, Parents, and Students in Online Learning

I Made Ardana<sup>1\*</sup>, I. P. Wisna Ariawan<sup>2</sup>, W. Sugandini<sup>3</sup> 

<sup>1,2</sup> Department of Mathematics Education, Universitas Pendidikan Ganesha, Singaraja, Indonesia

<sup>3</sup> Department of Nursing, Universitas Pendidikan Ganesha, Singaraja, Indonesia

## ARTICLE INFO

### Article history:

Received January 20, 2023

Accepted May 24, 2023

Available online June 25, 2023

### Kata Kunci:

Model Pembelajaran, Tri Hita Karana, Karakter, Pemahaman Konsep

### Keywords:

Learning Model, Tri Hita Karana, Character, Concept Understanding



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

Copyright © 2023 by Author. Published by Universitas Pendidikan Ganesha.

## ABSTRAK

Saat ini guru masih kurang memperhatikan pengembangan karakter, padahal seharusnya tujuan akhir pembelajaran selain menguasai pengetahuan dan keterampilan, tetapi harus ada pengembangan karakter. Tujuan penelitian adalah untuk memperoleh produk Model Pembelajaran berorientasi Kolaborasi Guru, Orang tua, dan Peserta didik berwawasan THK (MPbKGOP). Model ini dapat memudahkan peserta didik memahami konsep matematika dan sekaligus mengembangkan karakternya. Jenis penelitian adalah *research and development (R & D)* dari Plomp. Subjek penelitian adalah siswa kelas IV SDN 1 sebanyak 70 orang. MPbKGOP berwawasan THK beserta perangkat telah diuji melalui tahapan pengembangan preliminary investigation phase; design phase; realization/ construction phase; test, evaluation, and revision phase, implementation phase. Teknik analisis data yang digunakan yaitu analisis deskriptif kualitatif. Hasil penelitian menunjukkan bahwa MPbKGOP berwawasan THK beserta perangkat berada dalam kategori valid, praktis, dan efektif. MPbKGOP beserta perangkat efektif digunakan untuk memudahkan pemahaman konsep matematika dan pengembangan karakter peserta didik sehingga terjadi pergeseran kategori karakter yang cenderung mengarah ke katagori "Berkembang (B)" dan "Membudaya (M)".

## ABSTRAK

The teacher still needs to pay more attention to character development. Even though the ultimate goal of learning should be beyond mastering knowledge and skills, there must be character development. The research aimed to obtain a Collaboration Oriented Learning Model product for Teachers, Parents and Students with THK insight (MPbKGOP). This model can make it easier for students to understand mathematical concepts and, at the same time, develop their character. This type of research is research and development (R & D) from Plomp. The research subjects were 70 grade IV students of SDN 1. The THK-oriented MPbKGOP and its devices have been tested through the development stages of the preliminary investigation phase; design phase; realization/ construction phase; test, evaluation, and revision phase, and implementation phase. The data analysis technique used is descriptive qualitative analysis. The study results show that the MPbKGOP with THK insight and its tools are valid, practical and effective. MPbKGOP, along with effective tools, are used to facilitate the understanding of mathematical concepts and character development of students so that there is a shift in character categories that tend to lead to the categories "Developing (B)" and "Cultivating (M)".

## 1. INTRODUCTION

There are two main goals of education, namely: first to help students master certain knowledge to be bright and smart, then second to help students to be kind and wise (Ardana et al., 2021; Landrum et al., 2019; Nurmanita et al., 2019). The second educational goal is very difficult to achieve so it is very natural to say that moral problems are serious problems that accompany the lives of students wherever and whenever (Berghaus, 2016; Chan & Can, 2020; Habibi et al., 2020). In connection with that, it is very natural that character education is placed as the basis for realising the vision of national development, namely realising a society with noble, moral, ethical, cultured and civilised morals based on the philosophy of Pancasila (Abdulkarim et al., 2020; Agussalim et al., 2021; Sumardjoko & Musyiam, 2018).

\*Corresponding author.

E-mail addresses: [ardanaimade@undiksha.ac.id](mailto:ardanaimade@undiksha.ac.id) (I Made Ardana)

Character problems can arise as a result of the inability of students to achieve the first goal of educational goals (Suartama et al., 2020).

As a result, students will make all efforts that tend to be negative to achieve good learning outcomes such as: cheating habits, looking for leaked answers from unclear sources, and plagiarism (Davis-Becker, 2013; Kim, 2020). Therefore, it makes sense if character education is placed as the foundation of the national development vision to realize a society with noble character, morals, ethics, culture, and civility based on Pancasila. Thus, it is very necessary to design and implement learning to provide opportunities for students to construct knowledge as well as develop character (Ismail, 2021; Latifah et al., 2022; Mustikaningrum et al., 2020). However, teachers have not consciously considered character development in designing learning and tend to only emphasize knowledge. Moreover, when the government announced the outbreak of the covid-19 pandemic and the Ministry of Education and Culture issued Circular Letter Number 4 of 2020 which had an impact on the learning process from face to face to learning-from-home (LFH) or online. This change raises various challenges and even confusion for students, parents, and teachers (Albab, 2020; Fikri et al., 2021; Hutauruk & Sidabutar, 2020).

The confusion of teachers in teaching students through LFH can be seen from the learning process ignoring the three main models in the 2013 curriculum, namely Project Based Learning Model, Problem Based Learning Model, and Discovery Learning Model. This is evidenced by the learning process tends to apply the expository method emphasizing on verbal delivery of material from a teacher to a group of students so that students master learning material optimally (Arizona et al., 2020; Handayani, 2020; Primasari & Zulela, 2021). In this case, the learning material is delivered directly by the teachers to the students where the students are not required to find the concepts to be studied on their own.

The learning process tends to use lecture and question and answer methods and overload students with tasks. This raises anxiety among students and parents, especially elementary school students (Luthfi et al., 2021; Resty et al., 2019; Sudewa et al., 2021). With this learning model, instead of being able to develop character, students also find it difficult to understand the material, resulting in "learning loss" (Donnelly & Patrinos, 2021; Engzell et al., 2021; Michael & Lipps, 2021). As a result, the concept understanding was in the "low" category because students did not have the opportunity to construct concepts, while the character of students was still in the "Mulai Berkembang/Starting Developing (MBK)" category, meaning "students are able to realize behavior according to the assessment indicators but not consistent". However, if learning is carried out with the right model as recommended in The 2013 Curriculum, the character of students can be developed so that it can be in the "Berkembang/Developing (B)" category, meaning "students are gradually and in a conscious effort to be consistent in doing according to the character assessment rubric", and can even be in the "Membudaya/Cultured (M)" category, meaning "students always consistently display the behavior stated in the rubric".

Until now, teachers still do not pay attention to character development, even though the ultimate goal of learning should be in addition to mastering knowledge and skills, but there must be character development (Fatmawati et al., 2021; Sumardjoko & Musyiam, 2018). Thus, teachers should understand "knowledge is power but character is more". To achieve this and minimize the confusion among teachers, parents and students, it is necessary to divide their respective tasks in a collaboration. The proportion of tasks between teachers, parents, and students in collaboration during LFH is as follows. (1) Teachers design and implement learning based on digital learning materials with the following characteristics: (a) in line with the cognitive development of students; (b) digital materials are presented in the Zone of Proximal Development (ZPD); (c) the material is presented in problem-based and or project-based; (d) contains instructions for parents during assistance; and (e) contains good characters that students must do. (2) Parents besides observing the instructions during assistance, parents need to: (a) learn to listen to their children's explanations; (b) give reinforcement to children when they show the slightest positive attitude; (c) avoid blaming children even though they are actually wrong in doing the task, and (d) avoid taking over the assignment. (3) Students must (a) be disciplined and work hard in learning; (b) follow the directions of parents and teachers when studying; (c) observe the characters that must be followed in digital materials, and (c) always think positively where LFH feels like learning at school. Discipline, hard work, enthusiasm, positive thinking, and other good characteristics must be instilled in students by parents during assistance and by teachers during online learning (Intania & Sutarna, 2020; Wayan, 2020).

Character development through collaboration is in line with the general education concept in Law No. 20 of 2003 on the national education system emphasizing the importance of instilling divinity and humanity in an integrated manner. Thus, the noble value that needs to be integrated into learning process is THK (Narayani, 2019; Prastya et al., 2022). THK consists of the following elements: (1) parhyangan (human relationship with God through religiosity, faith, rastiti

(devotion) to the creator, living clean physically and spiritually); (2) pawongan (human relations with mutual assistance, mutual service, effective communication, collaboration, responsibility, learning, democracy, discipline, and mutual respect) and; (3) palemahan (human relations with the environment through care and preservation) (Aryantini et al., 2018; Sugihartini et al., 2018; Yunita & Trisiantari, 2019). Therefore, it is necessary to develop MPMbKGOP with THK and the media to build student character.

The role of the teachers is to compile digital materials with certain characteristics used by parents to assist students (Aeni & Yusupa, 2018; Riyanto et al., 2020; Setiawan et al., 2020). With this digital material, parents can repeat the material to be imparted to students with a pattern not much different from that of teachers so as to minimize parental anxiety (Febiharsa & Djuniadi, 2018; Yani & Jazariyah, 2020). In addition, intense communication between teachers and parents can occur at any time in order to help students master the concepts and character development of students. Assistance by parents makes students comfortable in learning so that their obligations as students can occur optimally. There are two impacts that occur in the implementation of the learning model, namely instructional and accompaniment impacts. The instructional impact is the MPMbKGOP with THK makes it easier for students to master mathematical concepts to be learned, while the accompanying impact is the development of good characters reflecting THK values, namely the harmonious relationships with God (faith, piety, gratitude, discipline), with fellow human beings (care for others, tolerance, solidarity, polite, honest), and with the environment (care for the environment, respect for nature). The aim of the research was to obtain a Collaboration Oriented Learning Model product for Teachers, Parents and Students with THK insight (MPbKGOP).

## 2. METHOD

This research and development (R&D) study focuses on developing a learning model and media. This study refers to the development model by Plomp (1999) consisting of (1) the preliminary investigation phase; (2) design phase; (3) realization/construction phase; (4) test, evaluation, and revision phase; and (5) implementation phase (Suarsana & Mahayukti, 2013). The subjects for validity test were 3 respondents consisting of 2 experts and 1 teacher. Meanwhile, the subjects used for practicality and effectiveness were 70 IV-graders of SDN 1 Baktiseraga and SDN 6 Panji Singaraja. To produce media relevant to MPMbKGOP with THK, it is necessary to comply with the seven criteria or principles of writing good teaching materials. In the first year (2021), MPMbKGOP with THK has met the practicality criteria (criteria 1 and 2). In year 2 (2022), observations will be made using previously produced media and the results will be compared with criteria 3. MPMbKGOP with THK along with the media is said to be practical, if it meets the following criteria. 1) More than half (50%) of validators considered that the learning model and the developed media can be applied in the classroom. 2) The teacher stated that they could apply the learning model along with the media developed in the classroom. 3) The implementation of the learning model and the media developed were at least in the "high" category. Model Implementation Criteria (KM) showed in Table 1.

**Table 1.** Model Implementation Criteria (KM)

No.	KM (%)	Kriteria
1	$KM \geq 90$	Very high
2	$80\% \geq KM < 90$	High
3	$70\% \geq KM < 80$	Medium
4	$60\% \geq KM < 70$	Low
5	$KM < 60$	Very Low

The data analysis technique in this study is descriptive qualitative analysis. The effectiveness of the model and the media developed can be seen in the character of the students. The model and the media developed are said to be effective if "the character of students is no longer in the "Requires Guidance (MB)" category and at least is in the "Starting to Develop (MBK)" category". Interviews and records were analyzed by logical analysis. Logical analysis consists of data reduction, data presentation, and conclusion drawing (Miles & Huberman, 2014).

## 3. RESULT AND DISCUSSION

### Result

MPMbKGOP-based teaching materials/media must (1) make it easier for students to understand the concepts studied; (2) able to develop character students through instructions; (2) make it easier for parents to accompany their children while studying; and (3) full involvement of students in constructing the concepts studied. The digital learning materials can be seen at: <https://www.geogebra.org/m/phadqdfn>. The character development of students during learning by implementing MPMbKGOP can be reported as shown in Figures 1.



Description: Requires Guidance (MB); Starting to Develop (MBK); Developing(B); and Cultured (M).

Figure 1. Results of Student Character Development

Figures 1 show that before MPMbKGOP was implemented, some students were still in the "MB" category meaning students did not reflect the behavior according to the assessment rubric. However, after MPMbKGOP was implemented, the character shift occurred significantly, so that the characters in the "MB" category = 0%, and the character shifts tended to lead to the "B" and "M" categories. However, there is still a small percentage for characters with the "MBK" category. All of this shows that the implementation of MPMbKGOP has a significant impact on character development.

Discussion

The preliminary phase in MPMbKGOP strengthens the character of students through several activities such as: (1) greetings (pawongan value), (2) organizing the cleanliness of the environment before starting the learning process (pawongan value), (3) presence (obedience, discipline; pawongan value), (4) praying together (prahyangan value), and (5) apperception. Apperception aims to make it easier for students to understand the concepts to be studied or in other words to make assimilation or accommodation easy for students through reflective thinking. This is in line with research stating that through reflective thinking, a person will obtain new information/ideas by connecting the information they have or modifying the ideas/information they have. This occurs in two ways: assimilation and accommodation (Akpur, 2020; Chonkaew et al., 2016; Choy & Oo, 2012; Mirzaei et al., 2014). Assimilation occurs when a new concept "fits" with prior knowledge and new information expands an existing network (Areesophonpichet, 2013; Mirzaei et al., 2014; Yildirim, 2017). Accommodation occurs when the new concept does not "fit" with the existing network (causing what Piaget called disequilibrium), so the brain can change or replace the existing schema. Teachers are tasked with observing the fitness between the ideas possessed by the newly learned information (Chen, 2022; Syahril et al., 2021; Xu & Zammit, 2020). If the information possessed by students is correct, learning can proceed to the implementation stage, and vice versa, if it is not correct, teachers will guide students to adjust their knowledge with the new information to be learned.

In the implementation phase, students learn offline and online following the digital learning materials compiled. The digital learning materials are also given to parents to assist students after finishing or during online learning (Burbules et al., 2020; Jamalpur et al., 2021; Oktavian & Aldya, 2020). When learning online or learning with parents, digital learning materials are very helpful for students in mastering concepts and developing characters. Mastery of concepts can occur optimally because digital learning materials can direct students to construct the concepts being studied (Suni Astini, 2020; Teräs et al., 2020; Tovar Viera et al., 2020). This can happen because when students have difficulty after trying, parents can help through the guide features on digital learning materials so that solutions are obtained to construct the concepts studied. Character development is supported by: (1) daily problems containing certain characters to be developed; (2) digital learning materials are arranged to contain problems related to certain characters and habits that are expected to be carried out by students.

The closing stage is more than just asking for confirmation and conclusions from students. In this stage, teachers engage students in activities and discussions that challenge and broaden their understanding of concepts and problem-solving skills (Anita et al., 2021; Saad & Zainudin, 2022; Sari et al., 2020). Students apply what they learn to develop, broaden, connect, and deepen their understanding of concepts (Junedi et al., 2020; Wardani et al., 2018; Yu et al., 2020). In addition to digital learning materials that can develop the character of students, learning with teachers online and with parents also has an effect. With the application of this learning pattern, the character developed in the "Developing (B)" category, namely "students are gradually and in a conscious effort to be consistent in doing according to the character assessment rubric". However, there were students who could only be developed to the category "MBK= starting to develop" meaning "students are able to realize behavior according to the assessment indicators but not consistent". On the other hand, there were some students who achieved the category "M = Cultured" meaning "students always consistently display the behavior stated in the rubric". Character development can occur because of the emergence of indicators in each character as a result of habituation and motivation by teachers, parents, and students during and before entering the concept being studied.

#### 4. CONCLUSION

Based on the results, MPbKGOP with THK and its media were in the valid, practical, and effective categories. MPbKGOP and its media were effectively used to develop honesty, discipline, responsibility, tolerance, mutual cooperation, confidence, and courtesy. Character development occurs as a result of conditioning collaboration between teachers, parents, and students in a conscious effort through learning.

#### 5. ACKNOWLEDGE

Researchers would like to thank the Chancellor and Head of Research and Community Service at the Ganesha University of Education who have provided opportunities and funds with contract number 966/UN48.16/LT/2022 to complete this research. Thank you to the Head of SDN 1 Baktiseraga Singaraja and SDN 6 Panji Singaraja for collaborating with researchers and giving permission to carry out the research. Thank you also to students who have helped expedite the implementation of research.

## 6. REFERENCES

- Abdulkarim, A., Komalasari, K., Saripudin, D., Ratmaningsih, N., & Anggraini, D. N. (2020). Development of a Unity in Diversity-Based Pancasila Education Text Book for Indonesian Universities. *International Journal of Instruction*, 13(1), 371–386. <https://doi.org/10.29333/iji.2020.13125a>.
- Aeni, W. A., & Yusupa, A. (2018). Model Media Pembelajaran E-Komik Untuk SMA. *Jurnal Kwangsan*, 6(1), 1. <https://doi.org/10.31800/jurnalkwangsan.v6i1.66>.
- Agussalim, A., Widjaja, S. U. M., Haryono, A., & Wahyono, H. (2021). Pancasila Economic Character Literacy Program for High School Students. *International Journal of Instruction*, 14(1), 235–252. <https://doi.org/10.29333/iji.2021.14114a>.
- Akpur, U. (2020). Critical, reflective, creative thinking and their reflections on academic achievement. *Thinking Skills and Creativity*, 37, 100683. <https://doi.org/10.1016/j.tsc.2020.100683>.
- Albab, S. U. (2020). Analisis kendala pembelajaran e-learning pada era disrupsi di SMK Terpadu Al-Islahiyah Singosari Malang. *Mudir: Jurnal Manajemen Pendidikan*, 2, 46–57. <https://doi.org/10.55352/mudir.v2i1.105>.
- Anita, Y., Thahir, A., Komarudin, K., Suherman, S., & Rahmawati, N. D. (2021). Buku Saku Digital Berbasis STEM: Pengembangan Media Pembelajaran terhadap Kemampuan Pemecahan Masalah. *Mosharafa: Jurnal Pendidikan Matematika*, 10(3), 401–412. <https://doi.org/10.31980/mosharafa.v10i3.1004>.
- Ardana, I. M., Wisna Ariawan, I. P., & Hendra Divayana, D. G. (2021). Measuring the Effectiveness of BLCS Model (Bruner, Local Culture, Scaffolding) in Mathematics Teaching by using Expert System-Based CSE-UCLA. *International Journal of Education and Management Engineering*, 7(4), 1–12. <https://doi.org/10.5815/ijeme.2017.04.01>.
- Areesophonpichet, S. (2013). A Development of Analytical Thinking Skills of Graduate Students by using Concept Mapping. *The Asian Conference on Education 2013 Official Conference Proceedings*, 1–16.
- Arizona, K., Abidin, Z., & Rumansyah, R. (2020). Pembelajaran Online Berbasis Proyek Salah Satu Solusi Kegiatan Belajar Mengajar Di Tengah Pandemi Covid-19. *Jurnal Ilmiah Profesi Pendidikan*, 5(1). <https://doi.org/10.29303/jipp.v5i1.111>.
- Aryantini, Agung, & Dantes. (2018). Kontribusi Implementasi Manajemen Sekolah Berbasis Nilai-Nilai Kearifan Lokal Tri Hita Karana, Kepemimpinan Pelayan Kepala Sekolah, Budaya Sekolah dan Kepuasan Kerja Terhadap Kinerja Guru di SMP Negeri Kecamatan Sukasada Kabupaten Buleleng. *Jurnal Administrasi Pendidikan Indonesia*, 9(2), 99–110. <https://doi.org/10.23887/japi.v9i2.2757>.
- Berghaus, P. T. (2016). The Problems of Authority and the Want of Apprenticeship in Soldiers' Character Development. *Journal of Moral Education*, 45(3), 324–337. <https://doi.org/10.1080/03057240.2016.1204272>.
- Burbules, N. C., Fan, G., & Repp, P. (2020). Five trends of education and technology in a sustainable future. *Geography and Sustainability*, 1(2), 93–97. <https://doi.org/10.1016/J.GEOSUS.2020.05.001>.
- Chan, D., & Can, V. (2020). Fairness in Resource Distribution: Relationship between Children's Moral Reasoning and Logical Reasoning. *Acta Educationis Generalis*, 10(3), 66–86. <https://doi.org/10.2478/atd-2020-0021>.
- Chen, Y. (2022). How to improve the quality of youth education in developing countries. *Proceedings of the 2021 International Conference on Education, Language and Art (ICELA 2021)*, 637(Icela 2021), 266–270. <https://doi.org/10.2991/assehr.k.220131.048>.
- Chonkaew, P., Sukhummek, B., & Faikhamta, C. (2016). Development of analytical thinking ability and attitudes towards science learning of grade-11 students through science technology engineering and mathematics (STEM education) in the study of stoichiometry. *Chemistry Education Research and Practice*, 17(4), 842–861. <https://doi.org/10.1039/c6rp00074f>.
- Choy, S. C., & Oo, P. S. (2012). Reflective thinking and teaching practices: a precursor for incorporating critical thinking into the classroom? *International Journal of Instruction*, 5(1), 168–182.
- Davis-Becker, S. (2013). Construct Maps: Do They Make the Unclear Clear? Measurement. *Interdisciplinary Research and Perspectives*, 11(4), 174–176. <https://doi.org/10.1080/15366367.2013.857980>.
- Donnelly, R., & Patrinos, H. A. (2021). Learning loss during Covid-19: An early systematic review. In *Prospects*. <https://doi.org/10.1007/s11125-021-09582-6>.
- Engzell, P., Frey, A., & Verhagen, M. D. (2021). Learning loss due to school closures during the COVID-19 pandemic. *Proceedings of the National Academy of Sciences of the United States of America*, 118(17). <https://doi.org/10.1073/PNAS.2022376118>.
- Fatmawati, E., Ismaya, E. A., & Setiawan, D. (2021). Pola Asuh Orang Tua Dalam Memotivasi Belajar Anak Pada Pembelajaran Daring. *Jurnal Educatio FKIP UNMA*, 7(1), 104–110. <https://doi.org/10.31949/educatio.v7i1.871>.
- Febiharsa, D., & Djuniadi, D. (2018). Pengembangan Media Pembelajaran Interaktif 3 Dimensi untuk

- Pembelajaran Materi Pengenalan Lingkungan Pada Anak Usia Dini di Indonesia. *Journal of Studies in Early Childhood Education (J-SECE)*, 1(1). <https://doi.org/10.31331/sece.v1i1.590>.
- Fikri, M., Ananda, M. Z., & Faizah, N. (2021). Kendala Dalam Pembelajaran Jarak Jauh di Masa Pandemi Covid-19: Sebuah Kajian Kritis. *Jurnal Education and development*, 9(1), 145–148. <https://doi.org/10.37081/ed.v9i1.2290>.
- Habibi, A., Razak, R. A., Yusop, F. D., Mukminin, A., & Yaqin, L. N. (2020). Factors affecting ict integration during teaching practices: A multiple case study of three indonesian universities. *Qualitative Report*, 25(5), 1127–1144. <https://doi.org/10.46743/2160-3715/2020.4150>.
- Handayani, L. (2020). Keuntungan , Kendala, dan Solusi Pembelajaran Online Selama Pandemi Covid-19: Studi Ekploitatif di SMPN 3 Bae Kudus. *Sunu Utama*, 1(2), 16. <https://doi.org/10.7777/jiemar.v1i2.36>.
- Hutauruk, A., & Sidabutar, R. (2020). Kendala pembelajaran daring selama masa pandemi di kalangan mahasiswa pendidikan matematika: Kajian kualiatatif deskriptif. *Journal of Mathematics Education and Applied*, 02(01), 45–51. <https://doi.org/10.36655/sepren.v2i1.364>.
- Intania, E. V., & Sutarna, S. (2020). The role of character education in learning during the COVID-19 pandemic Peran pendidikan karakter dalam pembelajaran selama pandemi. *Jurnal Penelitian Ilmu Pendidikan*, 13(2), 129–136. <https://doi.org/10.21831/jpipfip.v13i2.32979>.
- Ismail, M. J. (2021). Pendidikan Karakter Peduli Lingkungan Dan Menjaga Kebersihan Di Sekolah. *Guru Tua : Jurnal Pendidikan dan Pembelajaran*, 4(1), 59–68. <https://doi.org/10.31970/gurutua.v4i1.67>.
- Jamalpur, B., Kafila, Chythanya, K. R., & Kumar, K. S. (2021). A comprehensive overview of online education – Impact on engineering students during COVID-19. *Materials Today: Proceedings*. <https://doi.org/10.1016/j.matpr.2021.01.749>.
- Junedi, B., Mahuda, I., & Kusuma, J. W. (2020). Optimalisasi keterampilan pembelajaran abad 21 dalam proses pembelajaran pada Guru MTs Massaratul Mut'allimin Banten. *Transformasi: Jurnal Pengabdian Masyarakat*, 16(1), 63–72. <https://doi.org/10.20414/transformasi.v16i1.1963>.
- Kim, Y. (2020). Partial Identification of Answer Reviewing Effects in Multiple-Choice Exams. *Journal of Educational Measurement*, 57(4), 511–526. <https://doi.org/10.1111/jedm.12259>.
- Landrum, R. E., Brakke, K., & McCarthy, M. A. (2019). The pedagogical power of storytelling. *Scholarship of Teaching and Learning in Psychology*, 5(3), 247. <https://doi.org/10.1037/stl0000152>.
- Latifah, A., Sari, M. E., & Anggereni, D. T. (2022). Pembentukan Karakter Anak pada Perkembangan Sosial Emosional dengan Menanamkan Keberanian, Kejujuran dan Kepedulian di PAUD Cerdas Desa S.Kertosari. *Tazkirah: Transformasi Ilmu-ilmu Keislaman*, 7(1), 88–96. <https://doi.org/10.53888/tazkirah.v7i1.496>.
- Luthfi, M. R. A., Huda, C., & Susanto, J. (2021). Penerapan Model Pembelajaran Discovery Learning Untuk Meningkatkan Keaktifan Belajar Siswa pada Pembelajaran Tematik Kelas V Tema 8 di SD Negeri 1 Selo Kabupaten Grobogan Jawa Tengah. *Jurnal Paedagogy*, 8(3), 422. <https://doi.org/10.33394/jp.v8i3.3902>.
- Michael, & Lipps, O. (2021). Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID- 19 . The COVID-19 resource centre is hosted on Elsevier Connect , the company ' s public news and information. *Research in Social Stratification and Mobility*, 71, 1–5. <https://doi.org/10.1016/j.rssm.2020.100554>.
- Miles, M. B., & Huberman, A. M. (2014). *Qualitative Data Analysis-Third Edition*. London: Sage Publication Ltd.
- Mirzaei, F., Phang, F. A., & Kashefi, H. (2014). Assessing and Improving Reflective Thinking of Experienced and Inexperienced Teachers. *Procedia - Social and Behavioral Sciences*, 114. <https://doi.org/10.1016/j.sbspro.2014.05.111>.
- Mustikaningrum, G., Pramusinta, L., Ayu, S., & Umar, M. (2020). Implementasi Pendidikan Karakter Terintegrasi Kurikulum Dan Metode Pembelajaran Pada Masa Pandemi Covid-19. *AULADUNA: Jurnal Pendidikan Dasar Islam*, 7(2), 154–164. <https://doi.org/10.24252/auladuna.v7i2a5.2020>.
- Narayani, W. (2019). Pengaruh Model Pembelajaran Nht Berbasis Tri Hita Karana Terhadap Karakter Dan Hasil Belajar IPA. *Jurnal Pendidikan Multikultural Indonesia.*, 2(1). <https://doi.org/10.23887/jpnu.v2i1.20785>.
- Nurmanita, N., Siagian, P., & Sitompul, P. (2019). Development of Learning Device through Problem Based Learning Model Assisted by Geogebra to Improve Students' Critical Mathematical Thinking Ability. *Journal of Mathematical Sciences and Applications*, 7(1), 1–9. <https://doi.org/10.12691/JMSA-7-1-1>.
- Oktavian, R., & Aldya, R. F. (2020). Efektivitas Pembelajaran Daring Terintegrasi di Era Pendidikan 4.0.

- Didaktis: Jurnal Pendidikan dan Ilmu Pengetahuan*, 20(2), 129-135. <https://doi.org/10.30651/didaktis.v20i2.4763>.
- Prasty, C., Suja, I. W., & Sutajaya, W. (2022). Impelentasi Model Brain Based Learning Berbasis Tri Hita Karana Untuk Meningkatkan Karakter Berkebhinekaan Global Siswa Sekolah Dasar. *Jurnal Hurriah: Jurnal Evaluasi Pendidikan dan Penelitian*, 3(4). <https://doi.org/10.5806/jh.v3i4.115>.
- Primasari, I. F. N. D., & Zulela. (2021). Kendala Pembelajaran Jarak Jauh (PJJ) Secara Online Selama Masa Pandemi Covid-19 di Sekolah Dasar. *JIKAP PGSD: Jurnal Ilmiah Ilmu Kependidikan*, 5(1), 64-73. <https://doi.org/10.26858/jkp.v5i1.16820>.
- Resty, Z. N., Muhardjito, M., & Mufti, N. (2019). Discovery Learning Berbantuan Schoology: Upaya Peningkatan Kemampuan Berpikir Kritis. *Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan*. <https://doi.org/10.17977/jptpp.v4i2.12040>.
- Riyanto, R., Amin, M., Suwono, H., & Lestari, U. (2020). The New Face of Digital Books in Genetic Learning: A Preliminary Development Study for Students' Critical Thinking. *International Journal of Emerging Technologies in Learning (IJET)*, 15(10), 175. <https://doi.org/10.3991/ijet.v15i10.14321>.
- Saad, A., & Zainudin, S. (2022). A review of Project-Based Learning (PBL) and Computational Thinking (CT) in teaching and learning. *Learning and Motivation*, 78(December 2021), 101802. <https://doi.org/10.1016/j.lmot.2022.101802>.
- Sari, M., Anggoro, B. S., & Sugiharta, I. (2020). Analisis Peningkatan Kemampuan Pemecahan Masalah Dan Kemandirian Belajar Dampak Flipped Classroom Berbantuan Video Pembelajaran. *Nabla Dewantara*, 5(2), 94-106. <https://doi.org/10.51517/nd.v5i2.228>.
- Setiawan, N. C. E., Dasna, I. W., & Muchson, M. (2020). Pengembangan Digital Flipbook untuk Memfasilitasi Kebutuhan Belajar Multiple Representation pada Materi Sel Volta. *Hydrogen: Jurnal Kependidikan Kimia*, 8(2), 107. <https://doi.org/10.33394/hjkk.v8i2.3194>.
- Suarsana, I. M., & Mahayukti, G. A. (2013). Pengembangan E-Modul Berorientasi Pemecahan Masalah Untuk Meningkatkan Keterampilan Berpikir Kritis Mahasiswa. *Jurnal Nasional Pendidikan Teknik Informatika (JANAPATI)*, 2(3), 193. <https://doi.org/10.23887/janapati.v2i3.9800>.
- Suartama, Eges, T., Sukardi, A., Wiwik D, H., Usman, M., Singgih, S., Umar, & Mohammad, S. (2020). Development of E-Learning Oriented Inquiry Learning Based on Character Education in Multimedia Course. *European Journal of Educational Research*, 9(4). <https://doi.org/10.12973/eu-er.9.4.1591>.
- Sudewa, K. A., Sugihartini, N., & Divayana, D. G. H. (2021). Pengembangan Media Pembelajaran E-Learning Berbasis Edmodo Dengan Discovery Learning Pada Mata Pelajaran PPKN Kelas VIII Di SMP Lab Undiksha Singaraja. *Kumpulan Artikel Mahasiswa Pendidikan Teknik Informatika (KARMAPATI)*, 10(1), 25. <https://doi.org/10.23887/karmapati.v10i1.29407>.
- Sugihartini, N. M., Agung, A. A. G., & Dantes, K. R. (2018). Kontribusi Implementasi Menejemen Sekolah Berbasis Nilai-Nilai Kearifan Lokal Tri Hita Karana, Kepemimpinan Pelayan Kepala Sekolah dan Kepuasan Kerja Terhadap Komitmen Organisasional Guru di SMP Negeri Kota Singaraja Buleleng. *Jurnal Administrasi Pendidikan Indonesia*, 9(2), 111-120. <https://doi.org/10.23887/japi.v9i2.2776>.
- Sumardjoko, B., & Musyiam, M. (2018). Model of civic education learning based on the local wisdom for revitalizing values of pancasila (Bahasa Indonesia). *Cakrawala Pendidikan*, 37(2), 201-211. <https://doi.org/10.21831/cp.v37i2.18037>.
- Suni Astini, N. K. (2020). Tantangan Dan Peluang Pemanfaatan Teknologi Informasi Dalam Pembelajaran Online Masa Covid-19. *Cetta: Jurnal Ilmu Pendidikan*, 3(2), 241-255. <https://doi.org/10.37329/cetta.v3i2.452>.
- Syahrial, S., Asrial, A., Kurniawan, D. A., & Kiska, N. D. (2021). Improving Environmental Care Characters Through E-Modules Based on Local Wisdom Mangrove Ecotourism. *Jurnal Ilmiah Sekolah Dasar*, 5(3), 378. <https://doi.org/10.23887/jisd.v5i2.35360>.
- Teräs, M., Suoranta, J., Teräs, H., & Curcher, M. (2020). Post-Covid-19 Education and Education Technology 'Solutionism': a Seller's Market. *Postdigital Science and Education*, 2(3), 863-878. <https://doi.org/10.1007/s42438-020-00164-x>.
- Tovar Viera, R., Velasco Sánchez, Diego IsmaelTovar Viera, R., & Velasco Sánchez, D. I. (2020). Research on Technology Competencies in EFL Language Instructors: Technology-Pedagogy-Content in Language Teaching. *Script Journal: Journal of Linguistics and English Teaching*, 5(1), 32-43. <https://doi.org/10.24903/sj.v5i1.414>.
- Wardani, N. M. ., Suniasih, N. ., & Sujana, I. . (2018). Korelasi Antara Konsep Diri dengan Kemampuan Pemecahan Masalah IPS. *Jurnal Ilmiah Sekolah Dasar*, 2(2), 209-216. <https://doi.org/10.23887/jisd.v2i2.15498>.



- Wayan, I. (2020). Pendidikan Karakter pada Pembelajaran Daring. *Indonesian Values and Character Education Journal*, 3(1). <https://doi.org/10.23887/ivcej.v3i1.27830>.
- Xu, W., & Zammit, K. (2020). Applying Thematic Analysis to Education: A Hybrid Approach to Interpreting Data in Practitioner Research. *International Journal of Qualitative Methods*, 19, 1–9. <https://doi.org/10.1177/1609406920918810>.
- Yani, A., & Jazariyah, J. (2020). Penyelenggaraan PAUD Berbasis Karakter Kebhinekaan sebagai Upaya Pencegahan Radikalisme Sejak Dini. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 5(1), 1. <https://doi.org/10.31004/obsesi.v5i1.503>.
- Yıldırım, T. (2017). An examination of geography teachers ' reflective thinking tendencies. *Australian Journal of Teacher Education*, 6(6), 78–90. <https://doi.org/10.5430/ijhe.v6n6p78>.
- Yu, Z., Gao, M., & Wang, L. (2020). The Effect of Educational Games on Learning Outcomes, Student Motivation, Engagement and Satisfaction. *Journal of Educational Computing Research*, 59(3), 522–546. <https://doi.org/10.1177/0735633120969214>.
- Yunita, N. K. D., & Trisiantari, N. K. D. (2019). Pengaruh Model Pembelajaran Kooperatif Tipe Tgt Berbasis Kearifan Lokal Tri Hita Karana Terhadap Hasil Belajar. *Jurnal Pendidikan Multikultural Indonesia*, 1(2), 96. <https://doi.org/10.23887/jpmu.v1i2.20778>.