

Analysis of Needs for Empowerment Model Development Young Generation Cares About the Environment

Norhasanah^{1*}, Ahmad Suriansyah², Muhammad Zaini³, Aminuddin Prahatama Putra⁴

¹ Doctoral Program of Agricultural Sciences, Graduate School, Lambung Mangkurat University,
Jl. A. Yani Km 35.5, Banjarbaru, South Kalimantan, 70714, Indonesia*

² Lecturer in the Primary School Teacher Study Program, Faculty of Teacher Training and Education, Lambung Mangkurat University Jl. Brigadier General H. Hasan Basry, Banjarmasin 70123, South Kalimantan, Indonesia

^{3,4} Lecturer in the Biology Education Study Program, Faculty of Teacher Training and Education, Lambung Mangkurat University Jl. Brigadier General H. Hasan Basry, Banjarmasin 70123, South Kalimantan, Indonesia

*Corresponding author e-mail: 1940511320005@mhs.ulm.ac.id

Abstract. Environmental conditions are experiencing degradation and highlighting that environmental awareness among the younger generation is not yet optimal, so it is necessary to develop a model that involves the younger generation in the decision-making process regarding the environment, with the hope that it will produce sustainable pro-environmental actions. This research aims to develop a youth empowerment model based on *Participatory Problem Solving* to increase environmental awareness. This research is a type of research and development Research & Development (R&D). The data collection technique uses interviews using a needs analysis questionnaire and analyzed descriptively. The results of research on the analysis of the needs for empowering the younger generation show that the quality of human resources, the impact of increasing natural resources, and the participatory role in developing human resources are still low. The results of the analysis of the need for *participatory problem solving* show that participation-based problem solving and analyzing environmental problems is still low. It is hoped that the results of this research will become a basis for consideration in designing and developing models.

Keywords: Needs analysis, empowering the younger generation, caring for the environment.

1 Introduction

A damaged environment poses a threat to society, such as floods, landslides, pollution, depletion of water sources, drought, construction of slums, and an unhealthy environment which causes [1]. There are several environmental problems in Hulu Sungai Tengah Regency including; (1) urban areas have limited land, public awareness of waste management, clean, healthy, and environmentally friendly behavior has not been implemented optimally, (2) problems in upstream areas with reduced land cover in the Meratus mountains have resulted in very severe flash floods and flooding. Barabai city and its surroundings in 2021, (3) empowerment of the younger generation is still not optimal, this shows that the adiwiyata and healthy school programs in high schools are not yet optimal.

As an area grows and land needs increase, the tendency is to use wetlands to meet land needs [2]. We must preserve the environment, so that the environment is maintained and can be used by society in a sustainable manner, therefore it is necessary to understand environmental issues for the younger generation and surrounding communities to be able to play a role in solving problems resulting from environmental changes.

Development is carried out without considering environmental balance factors which in turn will cause environmental damage and pollution [3]. One of the problems in environmental management is that community participation, including the younger generation, is not yet optimal. On the other hand, most government programs require community empowerment and participation in the implementation process, where the community is placed strategically to determine the success of development programs [4]. Therefore, education is a strategic position for the younger generation to participate in protecting and managing the environment [5].

The younger generation is part of society, through a participatory model it can encourage active interaction and cooperation among the younger generation to gain knowledge and skills. Furthermore, developing solutions to specific challenges posed by the Sustainable Development Goals is through a structured participatory process [6], and is not only problem-oriented, but also provides young people with direct experience in solving them. This is in accordance with aspects of the Pancasila Student profile, including that the young generation can think critically and care about the environment, which is one element of the joint collaborative aspect.

Ongoing environmental changes are a real problem, through practical environmental action activities to improve problem solving skills and courage to care about the environment for the younger generation [7]. Apart from that, the role of the social environment in the family, school and community [8], such as mutual cooperation plays an important role in forming the environmental care attitude of the younger generation. One of the behaviors that needs to be formed for the nation's young generation is caring for the environment and taking responsibility for environmental damage that occurs in the environment [9].

Based on the character index of the young generation at secondary education level in 2019, the nationalism dimension score has the highest score; while the value of mutual cooperation is the weakest factor. Responding to the value of mutual cooperation which is the weakest dimension, this index survey recommends that education unit administrators make breakthroughs in increasing the dimension of mutual cooperation in the younger generation. The formation of an attitude of environmental concern in the younger generation cannot be separated from the role of teachers. The younger generation needs to be continuously given guidance, advice, warnings and examples related to environmental management [10].

The strategy for implementing the environmental values of the younger generation is implemented through self-development programs, integration in subjects, school programs and process development. These findings reinforce the importance of environmental moral education in understanding the ecological behavior of the younger generation [11]. Therefore, to produce human resources who have environmentally conscious behavior and love the environment in the younger generation, it is necessary to conduct research on a model of empowering the younger generation based on *participatory problem solving* in increasing environmental awareness. The research question specifically stated is how to analyze human resource quality needs and *participatory problem solving*.

2 Methods

Research and development uses the Borg & Gall design [12], this research focuses on analyzing the needs for empowering the younger generation and *participatory problem solving*, along with a summary of the research method shown in Table 1 below.

Table 1. Summary of Research Methods

No	Data type	Instruments used	Data collection technique	Data analysis
1	Empowering the younger generation	youth empowerment questionnaire	interview	categorized quantitative descriptive
2	<i>Participatory Problem Solving</i>	<i>Participatory Problem Solving</i> questionnaire	interview	categorized quantitative descriptive

The preliminary research carried out was in the needs analysis stage to obtain information related to empowering the younger generation in increasing environmental awareness. The young generation sampled in this research were taken through cluster sampling (area sampling) with the following criteria: (1) topography in the district. HST. (2) the younger generation in the area, including the OSIS, youth organizations, and mosque youth.

Based on these criteria, researchers conducted a needs analysis in the Meratus mountain area in Limpasu District, lowland and swamp areas in BAS and BAU Districts. The grid instruments and needs analysis questionnaires are a model for empowering the younger generation based on *participatory problem solving* for participants and teachers.

The size of the preliminary study subjects is presented in Table 2 as follows;

Table 2. Distribution of Research Subjects

No	Data source	Subject			Information
		Student Council	Mosque Youth	Youth Organization	
1.	Analysis of Participant Needs	3	3	3	9 people
2.	Teacher Needs Analysis	3	3	3	9 people

Table 2 explains that the subjects of this research were carried out in lowland and swamp areas in Batang Alai Selatan District and Batang Alai Utara District, while the Meratus mountain area was in Limpasu District. Analysis of the needs of participants in each sub-district was represented by one member of the OSIS, a member of the mosque youth, and a member of the youth organization. Meanwhile, the analysis of teaching needs in each sub-district is represented by an OSIS supervisor, a mosque youth supervisor, and a youth organization supervisor.

The expected results at this stage are that there is a theoretical basis for developing the model, the willingness and feasibility of using the environmental concept empowerment model as a basic need, the objective state of empowerment, and the problems that need to be overcome in developing a participatory problem solving empowerment *model*.

3 Results and discussion

The initial data from filling out the questionnaire and interview results is based on the following research variables.

3.1 Empowering the Young Generation

A summary of the results of the needs analysis regarding empowerment of the younger generation and its indicators is presented in Table 3 below.

Table 3. Summary of Results of Analysis of Young Generation Empowerment Needs

No	Indicator	Participant		Teacher	
		Yes (%)	No (%)	Yes (%)	No (%)
1	Developing the potential of the younger generation	77.78	22.22	77.78	22.22
2	Increasing productivity and quality of human resources	92.59	7.41	92.59	7.41
3	Increasing productivity and quality of natural resources	55.56	44.44	53.33	46.67
4	The impact of increasing human resource productivity	38.89	61.11	27.78	72.22
5	Impact of increasing natural resource productivity	27.78	72.22	11,11	88.89
6	Participatory role in human resource development	88.89	11,11	55.56	44.44
7	Growing economic added value.	77.78	22.22	66.67	33.33

Information:

Score achieved = Average score/Maximum score

Categories (76-100%) = high, (56-75%) = moderate, (40-55%) = low, and (<40%) = very low

Table 3 explains all high category indicators except indicators 3,4 and 5 for participants, it also explains only 2 high indicators, thus it can be interpreted that the indicators do not solely come from learning activities.

3.2 Participatory Problem Solving

A summary of the results of the needs analysis regarding *participatory problem solving* and its indicators is presented in Table 4 below.

Table 4. Summary of Results of *Participatory Problem Solving* Needs Analysis

No	Indicator	Participant		Teacher	
		Yes (%)	No (%)	Yes (%)	No (%)
1	Focuses on participation-based problem solving	55.56	44.44	77.78	22.22
2	Strengthening the reasoning power used by the younger generation	66.67	33.33	88.89	11,11
3	Gain a more basic understanding of the material/topic presented	77.78	22.22	66.67	33.33
4	Encourage the involvement of the younger generation	88.89	11,11	88.89	11,11
5	Directing the younger generation to play an active role by participating	77.78	22.22	100	0
6	Able to think critically in solving problems	66.67	33.33	77.78	22.22
7	Analyzing material starts by searching for data to drawing conclusions	55.56	44.44	88.89	11,11
8	Empower yourself with various environmental actions as participation in caring for the environment	77.78	22.22	100	0

Information:

Score achieved = Average score/Maximum score

Categories (76-100%) = high, (56-75%) = moderate, (40-55%) = low, and (<40%) = very low

Table 4 explains the balanced indicators between the high category and the medium category for participants, also explains most of the high category indicators, except indicator 3, meaning that the teacher's role is still needed to accompany participants in *participatory problem solving*. Based on the research results above, there are still several indicators that need improvement. This is a consideration in carrying out the design stage.

Analysis of the needs for empowering the younger generation shows that the quality of human resources, the impact of increasing natural resources, and the participatory role in human resource development are still low. This is in line with previous research [13],[14],[15],[16], [17]. There are still many challenges and problems faced that require assistance strategies in empowering, namely; identification, opportunity and obstacle factors, empowerment strategies, and coaching patterns [15], and the need for collaborative policy formulation [16], as well as carrying out youth development activities, which is carried out on an ongoing basis [17].

The quality of human resources and the impact of increasing natural resources need to be improved. Empowering the young generation aims to foster enthusiasm [18] and become aware and become a means for the young generation to learn and increase their insight and knowledge, as well as being able to put it into practice [19]. The potential of the younger generation tends to be barren because of the lack of productive activities. Therefore, the younger generation must be prepared so that they have a lot of knowledge, skills, good attitudes and character to lead and be the nation's successors [20] who are very physically productive and are expected to have moral strength, social control and agents of change. as an embodiment of its function, role, characteristics and strategic position in development [21].

Empowering the younger generation aims to improve the ability and knowledge of good organizational management [22], realizing *positive changes regarding the understanding and insight of training participants* [23], as well as developing *skills /abilities* by providing various form of practice [24]. Empowering the younger generation will opening opportunities for the availability of economically viable land, based on specialization of expertise [25], as well as creating a sustainable community empowerment system through strengthening applicable social, intellectual and organizational capital [26].

Increasing human resources is carried out so that the potential that has been embedded from the start in each citizen has the potential for very high achievement [27], there is a need for self-development and competence and will start to implement it in everyday life [28]. To build a learning society, the important role of formal education outside of school is the spearhead in implementing education that interacts directly with society. Education and training programs in the empowerment process can systematically increase understanding and awareness of productivity as well as the need to improve and produce human resources who are more productive, efficient, confident and competitive in a global context, fostering an entrepreneurial spirit in the younger generation, have skills and have economic independence to support daily life [29].

Analysis of the need for *participatory problem solving* shows that participation-based problem solving and analyzing environmental problems is still low. This is in line with previous research [30],[31],[32],[33],[34]. Participation-based problem solving and analyzing the environmental problems of the younger generation will stimulate the moral development of the younger generation, including logic, emotions, and behavior that is considered good and bad in the younger generation [35], and is not only problem-oriented, but also provides direct experience to the younger generation in solving environmental problems [36].

Ongoing environmental changes are a real problem, through practical environmental action activities to improve problem solving skills and courage to care about the environment for the younger generation [37],[38],[39],[40]. Educators are expected to be more creative and innovative and must direct the attention of the younger generation towards good and concrete critical thinking skills through various sources [41], as an effort to provide provisions for the younger generation to enter society [42]. The participatory role in human resource development is one of the factors that influences community behavior, namely the low level of independence of the younger generation in environmental matters. This is done so that the younger generation gains knowledge in the environmental field, apart from being able to practice an environmentally friendly lifestyle both at school and in the community.

Problem solving is considered the most relevant to participatory-based community empowerment efforts [43]. Creation of awareness, accumulation of knowledge, positive attitude, problem solving skills and community participation, [44]. Starts from the family environment. The curriculum of critical science institutions focuses on how the actions of the younger generation can have a significant impact on the environment [45], through observations in situations directly involved in the environment [46].

The development of environmental awareness can be implemented through environmentally based religious values, through the example of educators who have noble morals, especially those who care about the environment [47]. However, collaboration between all parties is needed to meet the learning needs of society [48], as well as the need for independence, competitiveness and competence of society at the individual, group and institutional levels to be independent, sovereign and competitive [48]. The younger generation needs to involve themselves in academic intellectual-based activities, so that they can practice structured, logical and systematic thinking, broad-minded, broad-minded, inclusive, rational, critical, selective and constructive in seeing personal and social reality [49].

Empowering the current young generation should continue to be carried out, considering that the young generation as the nation's successors must have good potential, abilities and skills, so it is necessary to develop a model for empowering the young generation. The 21st century demands the mastery of various competencies by the younger generation as an effort to strengthen competitiveness, especially in the field of human resources [50]. Empowerment development is really needed due to several factors such as the quality of human resources, utilization of natural resources [51], where the development strategy requires regular and continuous guidance [52].

Empowerment efforts must be directed at programs designed to overcome problems according to conditions and needs that require cooperation, and require guidance and supervision in their implementation, and form a comprehensive generation of young people, including soul, mind and character [53]. So that they grow and develop optimally, according to their potential. they have which involves them actively [54], growing and developing as complete human beings in accordance with national education goals [55] in empowering the younger generation [56].

The development of a generational empowerment model is carried out to build educational awareness of the younger generation in the environment by conducting workshops and empowering them through *life skills education* activities in the form of skills that they do not often get in formal schools, by monitoring the level of empowerment [57]. Apart from that, developing the potential of the younger generation is receiving increasing attention as a means of empowering society [58], not only through formal education, but can be done through platforms (institutions or organizations) that have commitment [59] to support their soft skills [60] as the main actor in all stages of planning, implementation, monitoring and evaluation of activities [61].

4 Conclusion

The conclusions of this research are:

- a. The results of the analysis of the needs for empowering the younger generation show that the quality of human resources, the impact of increasing natural resources, and the participatory role in developing human resources are still low.
- b. The results of the analysis of the need for *participatory problem solving* show that participation-based problem solving and analyzing environmental problems is still low.

5 Recommendation

Based on the conclusions above, recommendations will be used for planning and developing the model. The follow-up to these findings is to design a model. There are several things that need improvement, namely;

- a. Empowerment of the younger generation regarding increasing the productivity and quality of natural resources, the impact of increasing human resource productivity, and participatory roles in human resource development is still low.
- b. *Participatory problem solving* is about focusing on participation-based problem solving, strengthening the reasoning power used by the younger generation, gaining a more basic understanding of the material/topic presented, thinking critically in solving problems, analyzing material starting by searching for data to drawing conclusions that are not yet optimal.

References

- [1] F. Azmi and E. Elfayetti, "Analisis Sikap Peduli Lingkungan Siswa Melalui Program Adiwiyata Di SMA Negeri 1 Medan," *J. Geogr.*, 2017, doi: 10.24114/jg.v9i2.6901.
- [2] S. Margasatwa *et al.*, "Membuat Hidup di Kota Semakin Hidup," pp. 1–2, 2018.
- [3] N. Herlina, "PERMASALAHAN LINGKUNGAN HIDUP DAN PENEGAKAN HUKUM LINGKUNGAN DI INDONESIA," *J. Ilm. Galuh Justisi*, 2017, doi: 10.25157/jigj.v3i2.93.
- [4] * B. S. H. M. S. M., "Pengaruh Pendidikan Kependudukan dan Lingkungan Hidup

- Terhadap Perilaku Peduli Lingkungan,” *SOCIA J. Ilmu-Ilmu Sos.*, vol. 11, no. 1, Sep. 2015, doi: 10.21831/socia.v11i1.5285.
- [5] M. B. A. Sya’ban, “Tinjauan Mata Pelajaran IPS SMP Pada Penerapan Pendidikan Lingkungan Hidup Untuk Peduli Akan Tanggung Jawab Lingkungan,” *J. Geogr. Edukasi dan Lingkung. (JGEL)*2, vol. 02, no. 01, p. 33, 2018.
- [6] D. Ortiz and K. Huber-Heim, “Ortiz & Huber-Heim, 2017,” *Int. J. Manag. Educ.*, 2017, doi: 10.1016/j.ijme.2017.03.008.
- [7] dkk Ardianti 2017, “Peningkatan Perilaku Peduli Lingkungan Dan Tanggung Jawab Siswa Melalui Model Ejas Dengan Pendekatan Science Edutainment,” *J. Pendas*, 2017.
- [8] Adawiyah, R. et.al. Adiwiyata School Problematics in Building the Students’ Attitudes And Behavior of the Environment Awareness. *Ilkogretim Online - Elementary Education Online*, Year; Vol 20 (Issue 5): pp. 258-264. 2021. <http://ilkogretim-online.org>. doi: 10.17051/ilkonline.2021.05.24
- [9] A. Begum, L. Jingwei, M. Haider, M. M. Ajmal, S. Khan, and H. Han, “Impact of environmental moral education on pro-environmental behaviour: Do psychological empowerment and islamic religiosity matter?,” *Int. J. Environ. Res. Public Health*, vol. 18, no. 4, pp. 1–19, Feb. 2021, doi: 10.3390/ijerph18041604.
- [10] R. S. Istoria Hidayah N, “Pemberdayaan Masyarakat Dalam Pengembangan Desa Wisata Jatimulyo, Girimulyo, Kulon Progo, Daerah Istimewa Yogyakarta Community,” *J. Chem. Inf. Model.*, vol. 53, no. 9, pp. 1689–1699, 2013.
- [11] J. Mijiarto, W. Wahyuni, P. F. Nuryananda, and W. K. F. Ahzani, “Tantangan Pembentukan Identitas Kampung Besek dan Pemberdayaan Perempuan di Desa Tegaren,” *Khasanah Ilmu - J. Pariwisata Dan Budaya*, vol. 13, no. 1, pp. 18–25, 2022, doi: 10.31294/khi.v13i1.11405.
- [12] I. G. A. A. Y. Dewi, “Peran Generasi Milenial Dalam Pengelolaan Sampah Plastik Di Desa Penatih Dangin Puri Kecamatan Denpasar Timur Kota Denpasar,” *Public Inspir. J. Adm. Publik*, vol. 3, no. 2, pp. 84–92, 2018.
- [13] H. Noviar, A. Saputra, S. Syahril, F. Fitriadi, and ..., “Tantangan Pengembangan Pertanian Wilayah Pedesaan (Studi Kasus Desa Leuken),” *J. Pengabd. Agro ...*, vol. 3, no. 1, pp. 16–27, 2023, [Online]. Available: <http://jurnal.utu.ac.id/agromarine/article/view/7614%0Ahttp://jurnal.utu.ac.id/agromarine/article/download/7614/3812>.
- [14] L. Ashary, “Optimalisasi Pemberdayaan Karang Taruna Dalam Pengembangan Desa Silomukti Kabupaten Situbondo,” *Optim. Pemberdaya. Karang Taruna Dalam Pengemb. Desa Silomukti Kabupaten Situbondo*, pp. 725–738, 2016.
- [15] W. N. Azizah, M. Ishom, and E. Widiyanto, “Bank Sampah Sebagai Alternatif Strategi Pemberdayaan Masyarakat dalam Mengembangkan Kampung Wisata Tematik ‘Kampung Putih’ Kota Malang,” *Diklus J. Pendidik. Luar Sekol.*, vol. 4, no. 2, pp. 88–100, 2020, doi: 10.21831/diklus.v4i2.31528.
- [16] A. Hidir, N. L. Meilani, and S. Hendriani, “Model Pemberdayaan Remaja berbasis Generasi Berencana (GenRe) dalam Pengembangan Ekowisata Bono Kabupaten Pelalawan,” *Pros. Semin. Nas.*, no. January 2019, 2016, [Online]. Available: https://www.academia.edu/download/58136161/MODEL_PEMBERDAYAAN_REM_AJABERBASIS_GENERASI_BERENCANA.pdf.

- [17] L. L. N. El Hasanah, "Pengembangan Wirausaha Muda Ekonomi Kreatif Berbasis Budaya di Daerah Istimewa Yogyakarta," *J. Stud. Pemuda*, vol. 4, no. 2, p. 268, 2018, doi: 10.22146/studipemudaugm.36812.
- [18] R. Khaldun, "Pemberdayaan (pemuda) karang taruna dalam meningkatkan dan menumbuhkan minat bisnis kreatif di Desa Giri Madia Kecamatan Lingsar Kabupaten Lombok Barat," *Transform. J. Pengabd. Masy.*, vol. 12, no. 2, pp. 168–185, 2016, doi: 10.20414/transformasi.v12i2.2398.
- [19] S. Paramita, "Entrepreneurship Dan New Media Pada Generasi Muda," *Kaji Tindak J. Pemberdaya. Masyarakat*, no. May, 2016, [Online]. Available: <http://lpkmv-untar.org/jurnal/index.php/kajitindak/article/view/35>.
- [20] A. Farizal and Ismaniar, "Pendekatan Andragogi dalam Pemberdayaan Generasi Muda melalui Pendidikan Luar Sekolah," *J. Pendidik. Tambusai*, vol. 4, no. 3, pp. 3289–3293, 2020.
- [21] A. G. Lantemona, F. Pangemanan, and N. Kumayas, "Kinerja Dinas Pemuda Dan Olahraga Dalam Pemberdayaan Generasi Muda (Suatu Studi Di Kabupaten Bolaang Mongondow)," *J. Gov.*, vol. 1, no. 2, pp. 1–10, 2021.
- [22] S. Rizal, "Pemberdayaan Generasi Muda Melalui Enterpreneurship di Gampong Leuge Kecamatan Peureulak Kabupaten Aceh Timur," *TRIDARMA-Pengabdian Kpd. Masy.*, vol. 3, no. 1, pp. 35–39, 2020.
- [23] P. Subekti, H. Hafiar, F. A. A. Prastowo, and D. Masrina, "Pemberdayaan Generasi Muda Melalui Pengenalan dan Pelatihan Kewirausahaan di Kabupaten Pangandaran," *J. Pengabd. Masy. Indones.*, vol. 2, no. 2, pp. 131–136, 2022, doi: 10.52436/1.jpni.408.
- [24] L. Ahmad, M. Wali, R. Akbar, and J. Syafwandhinata, "IbM Pemberdayaan Generasi Muda melalui Enterpreneurship," *J. Pengabd. Nas. Indones.*, vol. 1, no. 1, pp. 30–36, 2020, doi: 10.35870/jpni.v1i1.5.
- [25] O. Anwarudin, S. Sumardjo, A. Satria, and A. Fatchiya, "Process and Approach to Farmer Regeneration Through Multi-strategy in Indonesia," *J. Penelit. dan Pengemb. Pertan.*, vol. 39, no. 2, p. 73, 2020, doi: 10.21082/jp3.v39n2.2020.p73-85.
- [26] J. Suhariyanto, A. Zainal, and K. Budiarta, "Pemberdayaan Sumber Daya Lokal Dalam Pengelolaan Sektor Industri Kreatif Di Kecamatan Banda Sakti Kota Lhokseumawe: Studi Kualitatif Atas Peran Corporate Social Responsibility (Csr) Pt. Pertamina (Persero) Marketing Operation Region (Mor) I – Terminal Bah," *J. Pengabd. Kpd. Masy.*, vol. 24, no. 3, p. 792, 2018, doi: 10.24114/jpkm.v24i3.11616.
- [27] E. Dwimawati, F. Beliansyah, and S. A. Zulfa, "Pemberdayaan Masyarakat Melalui Pemanfaatan Teknologi Dalam Rangka Meningkatkan Kualitas Sumber Daya Manusia Di Desa Gunung Menyan," *Abdi Dosen J. Pengabd. Pada Masy.*, vol. 3, no. 1, 2019, doi: 10.32832/abdidos.v3i1.290.
- [28] M. Z. Auriza, M. Supu, S. Bachri, C. Antasari, and Desmiati, "Pengembangan SDM karang taruna Cipta Karya Desa Matansala Kabupaten Morowali," *J. Pengabd. Ahmad Yani*, vol. 2, no. 2, pp. 31–37, 2022, [Online]. Available: <https://www.sttibontang.ac.id/jurnal/index.php/pay/article/view/83/59>.
- [29] I. K. Sudarsana, "Peningkatan Mutu Pendidikan Luar Sekolah Dalam Upayapembangunan Sumber Daya Manusia," *J. Penjaminan Mutu*, vol. 1, no. 1, p. 1, 2016, doi: 10.25078/jpm.v1i1.34.

- [30] N. Ernita, "The Effect of Participatory Learning Models Using Critical Problem Solving Techniques on the Learning Achievements of Physics Students," *Konstan - J. Fis. Dan Pendidik. Fis.*, vol. 7, no. 1, pp. 82–89, 2022, doi: 10.20414/konstan.v7i1.179.
- [31] L. H. Winingsih, I. Agung, and A. A. Sulistiono, "The influence of government policy, principle leadership, and participation of parents on strengthening teacher organizations (KKG/MGMP) and development of problem solving in students: Indonesia case," *Int. J. Educ. Pract.*, vol. 7, no. 4, pp. 479–493, 2019, doi: 10.18488/journal.61.2019.74.479.493.
- [32] A. G. C. Wicaksono and E. Korom, "Review of problem-solving measurement: An assessment developed in the Indonesian context," *Particip. Educ. Res.*, vol. 9, no. 1, pp. 116–136, 2022, doi: 10.17275/per.22.7.9.1.
- [33] J. P. M. W. Parahita and P. Di, "Penguatan kapasitas," 2017.
- [34] A. O. Nazaruddin, "Pengaruh Penguatan Kelompok Tani Terhadap Partisipasi dan Motivasi Pemuda Tani Pada Usaha Pertanian di Leuwiliang, Bogor," *J. Agribisnis Terpadu*, pp. 1–14, 2017.
- [35] A. P. Putra, M. Ibrahim, H. Huldani, B. I. Sukmana, F. Fauziah, and H. Achmad, "Are There Levels of Students Morales? The Effects of Biological Problem Solving on Moral Development," *Int. Educ. Stud.*, vol. 13, no. 6, 2020, doi: 10.5539/ies.v13n6p32.
- [36] E. Fitriah, "Implementasi Model Creative Problem Solving Berbasis Sets Dalam Meningkatkan Keterampilan Proses Sains Dan Kreativitas Siswa Sma Berbasis Pesantren," *J. Sci. Educ.*, vol. 2, no. 2, pp. 3–4, 2016.
- [37] I. Tivani and P. Paidi, "Pengembangan LKS biologi berbasis masalah untuk meningkatkan kemampuan pemecahan masalah dan karakter peduli lingkungan," *J. Inov. Pendidik. IPA*, 2016, doi: 10.21831/jipi.v2i1.8804.
- [38] I. H. Wenno, "PENGEMBANGAN MODEL MODUL IPA BERBASIS PROBLEM SOLVING METHOD BERDASARKAN KARAKTERISTIK SISWA DALAM PEMBELAJARAN DI SMP/MTs," *J. Cakrawala Pendidik.*, 2010, doi: 10.21831/cp.v2i2.338.
- [39] N. KARINA, M. Sadia, and M. Suastra, "PENGARUH MODEL PEMBELAJARAN BERBASIS PROYEK TERHADAP KEMAMPUAN PEMECAHAN MASALAH DAN KECERDASAN EMOSIONAL SISWA SMP," *J. Pendidik. dan Pembelajaran IPA Indones.*, 2014.
- [40] K. Komariah, "Penerapan Metode Pembelajaran Problem Solving Model Polya Untuk Meningkatkan Kemampuan Memecahkan Masalah Bagi Siswa Kelas IX J Di SMPN 3 Cimahi," *Pros. Semin. Nas. Penelitian, Pendidik. dan Penerapan MIPA, Fak. MIPA, Univ. Negeri Yogyakarta*, 2011.
- [41] Y. L. Lee, "Nurturing critical thinking for implementation beyond the classroom: Implications from social psychological theories of behavior change," *Think. Ski. Creat.*, 2018, doi: 10.1016/j.tsc.2018.02.003.
- [42] K. E. Mumpuni, "Potensi Pendidikan Keunggulan Lokal Berbasis Karakter Dalam Pembelajaran Biologi Di Indonesia," *Pros. Semin. Nas. X Pendidik. Biol. FKIP UNS*, 2013.
- [43] T. Tãm, N. C. Ú U. Vã, C. Ê N. Giao, C. Ngh, and Â N B U I Chu, "濟無No Title No

- Title No Title,” vol. 01, no. 3, pp. 1–23, 2016.
- [44] H. R. Singh and S. A. Rahman, “An Approach for Environmental Education by Non-Governmental Organizations (NGOs) in Biodiversity Conservation,” *Procedia - Soc. Behav. Sci.*, 2012, doi: 10.1016/j.sbspro.2012.04.175.
- [45] K. L. McNeill and M. H. Vaughn, “Urban High School Students’ Critical Science Agency: Conceptual Understandings and Environmental Actions Around Climate Change,” *Res. Sci. Educ.*, 2012, doi: 10.1007/s11165-010-9202-5.
- [46] T. Setiyoningsih, “Pengelolaan Pembelajaran IPA Berbasis Lingkungan di SMPN 1 Gabus-Grobogan,” *Manaj. Pendidik.*, 2017, doi: 10.23917/jmp.v12i1.2970.
- [47] E. S. Nurulloh, “Pendidikan Islam dan Pengembangan Kesadaran Lingkungan,” *J. Penelit. Pendidik. Islam*, vol. 7, no. 2, p. 237, 2019, doi: 10.36667/jppi.v7i2.366.
- [48] R. B. Suharta and E. Kusumawardani, “Integrasi Program Sadar Wisata Dalam Membangun Kesadaran Literasi Di Desa Nglanggeran cepat , praktis , dan terbuka . Era global berbagai negara , tak terkecuali Indonesia . mendapatkan bonus demografi di mana usia produktif yang sangat besar memberi damp,” no. 1, 2016.
- [49] S. Al Asadullah and Nurhalin, “Peran pendidikan karakter dalam membentuk kemampuan berpikir kritis generasi muda Indonesia [The role of character education in shaping the critical thinking skills of Indonesia’s young generation],” *Kaisa J. Pendidik. dan Pembelajaran*, vol. 1, no. 1, pp. 12–24, 2021, [Online]. Available: <https://ejournal.kampusmelayu.ac.id/index.php/kaisa>.
- [50] F. F. K. Sari and I. R. W. Atmojo, “Analisis Kebutuhan Bahan Ajar Digital Berbasis Flipbook untuk Memberdayakan Keterampilan Abad 21 Peserta Didik pada Pembelajaran IPA Sekolah Dasar,” *J. Basicedu*, vol. 5, no. 6, pp. 6079–6085, 2021, doi: 10.31004/basicedu.v5i6.1715.
- [51] A. S. Mandang, E. Wantah, A. F. Kawulur, and A. Manongko, “Identifikasi dan Analisa Kebutuhan Pengembangan Model Pemberdayaan UMKM di Minahasa Utara,” *SEIKO J. Manag. Bus.*, vol. 6, no. 1, pp. 875–879, 2023, [Online]. Available: <https://journal.stieamkop.ac.id/index.php/seiko/article/view/4336%0Ahttps://journal.stieamkop.ac.id/index.php/seiko/article/download/4336/2827>.
- [52] L. G. Otaya, S. A. Tjabolo, and R. T. Husain, “Analisis kebutuhan pemberdayaan ibu rumah tangga miskin melalui usaha kerajinan tangan khas Gorontalo ‘Mohalamu Tiohu,’” *JPPM (Jurnal Pendidik. dan Pemberdaya. Masyarakat)*, vol. 6, no. 1, pp. 59–75, 2019, doi: 10.21831/jppm.v6i1.21736.
- [53] S. Prihantoro, “Strategi Pemberdayaan Masyarakat Miskin dalam Meningkatkan Pendapatan (Studi Empiris di Kelurahan Bandung Kecamatan Kutoarjo Kabupaten Purworejo),” *J. Non Form. Educ. Community Empower.*, vol. 2, no. 2, pp. 15–21, 2017.
- [54] S. Nuryanto, “Manajemen Kegiatan Ekstrakurikuler di SD Al Irsyad 01 Purwokerto,” *J. Kependidikan*, vol. 5, no. 1, pp. 151–168, 2017, doi: 10.24090/jk.v5i1.1260.
- [55] F. Diantoro, “Manajemen Peserta Didik dalam Pembinaan Perilaku Keberagamaan,” *Cendekia J. Kependidikan Dan Kemasyarakatan*, vol. 16, no. 2, p. 409, 2018, doi: 10.21154/cendekia.v16i2.1207.
- [56] N. A. Wiyani, “Format Kegiatan Kepramukaan Sebagai Ekstrakurikuler Wajib Di Madrasah Ibtidaiyah Dalam Kurikulum 2013,” *Insa. J. Pemikir. Altern. Kependidikan*, vol. 19, no. 1, pp. 148–168, 1970, doi: 10.24090/insania.v19i1.468.

- [57] A. Muhtarom, "Participation Action Research dalam Membangun Kesadaran," *Dimas*, vol. 18, no. 2, pp. 259–278, 2018.
- [58] F. Abdillah, F. Manurung, A. Natzmi, N. H. Harahap, and R. Muary, "Pengembangan Potensi Generasi Muda Terkait Tradisi Budaya Lokal sebagai Sarana Pemberdayaan Masyarakat melalui Program KKN di Nagori Dolok Mainu," *J. Hum. Educ.*, vol. 3, no. 2, pp. 470–476, 2023.
- [59] P. Ramlan, "Optimalisasi Karang Taruna dalam Pengembangan Potensi Generasi Muda di Desa Tuncung," *MALLOMO J. Community Serv.*, vol. 1, no. 1, pp. 42–49, 2020, doi: 10.55678/malomo.v1i1.307.
- [60] P. K. Wulandari, "Generasi Sadar Wisata (Pemberdayaan Pemuda dan Pendidikan Duta Wisata di Kabupaten Trenggalek)," *J. Sociol. Pendidik. Humanis*, vol. 1, no. 2, pp. 140–148, 2016, doi: 10.17977/um021v1i22016p140.
- [61] N. Kurniawati, R. E. Werdani, and K. Kholidin, "Pengembangan Desa Wisata Taman Tangkulan Berbasis Teknologi Dengan Memberdayakan Generasi Muda Pada Desa Sidoarum Godean Kabupaten Sleman," *GOTAVA J. Pengabd. Kpd. Masy.*, vol. 1, no. 1, pp. 1–6, 2023, doi: 10.59891/jpmgotava.v1i1.2.